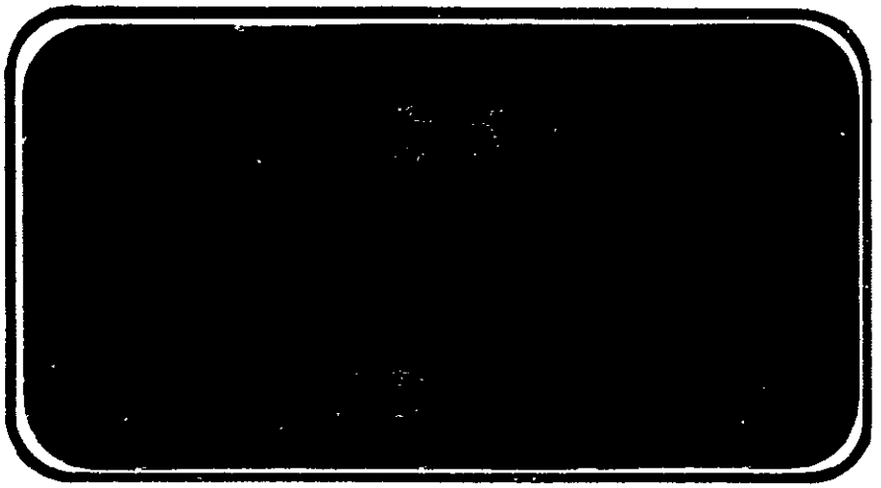
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(NASA-CR-144593) AN INVESTIGATION OF DRAG REDUCTION FAIRINGS ON THE SPACE SHUTTLE VEHICLE 5 CONFIGURATION (MODEL 74-OTS) IN THE MSFC 14 INCH TRISONIC WIND TUNNEL (FA14) (Chrysler Corp.) 438 p HC $11.75 CSCL 22B G3/18 N76-18218 Unclas 19291

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AN INVESTIGATION OF DRAG REDUCTION FAIRINGS ON THE SPACE SHUTTLE VEHICLE 5 CONFIGURATION (MODEL 74-OTS) IN THE MSFC 14 INCH TRISONIC WIND TUNNEL (FA14)

by

P. E. Ramsey, NASA/MSFC

Prepared under NASA Contract Number NAS9-13247

by

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for

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Houston, Texas

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NASA Series No.:	FA14
Model No.:	74-OTS
Occupancy Hours	142
Test Date:	January 9-20, 1975, and July 23-August 6, 1975

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AN INVESTIGATION OF DRAG REDUCTION FAIRINGS ON THE SPACE SHUTTLE VEHICLE 5 CONFIGURATION (MODEL 74-OTS) IN THE MSFC 14 INCH TRISONIC WIND TUNNEL (FA14)

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ABSTRACT

An experimental investigation was conducted in the MSFC 14-inch TWT (FA14, TWT 600) to determine the static stability and drag on a 0.004 scale model of the shuttle ascent configuration. The primary objective was to study the possibility of reducing the launch vehicle drag by using Orbiter/ET/SRB fairings, streamlined orbiter fore and aft attach structures, SRB and ET alternative nose configuration, and devices for modifying the flow between the orbiter and ET.

The secondary objective was to determine the longitudinal and directional characteristics of the ascent configuration with the most promising of the drag reduction devices installed. Data were obtained for a Mach number range of 0.6 through 4.96 and angles of attack from -5 through 5 degrees at zero degrees side slip angle.

The test configuration consisted of the orbiter and ET from the Rockwell model 74-OTS, ascent vehicle 5 which was used during IA33. New SRB's were designed to MSFC drawing 10A00319 and fabricated by

MSFC for this investigation. All major protuberances were included on the ET and SRB's.

The fairings, noses, ramps, and attach structures were separate, removable pieces which were attached to the ET or SRB. The test procedure consisted of installing a fairing, pair of fairings, ramp, etc., making a test run, then replacing the fairing with another for the following run.

A second test phase was conducted to study the drag reduction potential of cut-down SRB attach and structural rings, additional SRB nose shapes, and ET nose configurations. This phase was run at Mach numbers of 0.6 to 4.96 for angles of attack of -5 to 5 degrees. A stycast plastic orbiter model was used with the original ET and SRB models during the second phase and was designated O_2. The O_2 nomenclature was adapted to define the baseline orbiter without a vertical tail after it was accidently broken off. However, because the drag effects resulting from configuration changes were of primary interest, the increments between the tailess baseline and the test configurations are considered valid.

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PLOTTED COEFFICIENTS SCHEDULE:

(A) CN,CLM,CA,CAF VERSUS ALPHA

(B) CA VERSUS ALPHA

NOMENCLATURE
(General)

SYMBOL	PLOT SYMBOL	DEFINITION
a		speed of sound; ft/sec
Cp	CP	pressure coefficient; $(p_1 - p)/q$
M	MACH	Mach number; V/a
P		pressure; psi
q	Q(PSI)	dynamic pressure; $1/2\rho V^2$, psi
RN/L	RN/L	unit Reynolds number; per ft
V		velocity; ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ρ		mass density; slugs/ft^3
		Reference and C.G. Definitions
A_b		base area; in^2, ft^2
b	BREF	wing span or reference span; in.
c.g.		center of gravity
ℓ_{REF}	LREF	reference length or wing mean aerodynamic chord; in.
S	SREF	wing area or reference area; in^2, ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis

NOMENCLATURE (Continued)
(General)

SYMBOL	PLOT SYMBOL	DEFINITION
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream
O	orbiter
S	solid rocket booster
E	external tank

NOMENCLATURE (Continued)

(Body Axis System)

SYMBOL	PLOT SYMBOL	DEFINITION
C_{N^1}		normal-force coefficient, uncorrected for base pressure forces, $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient
C_{m^1}		pitching-moment coefficient, uncorrected for orbiter base axial force, $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_ℓ	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
$C_{N_{b_O}}$	CNBO	orbiter base normal force coefficient
C_{p_b}	CPB	base pressure coefficient
C_N	CN	normal force coefficient corrected for orbiter base pressure
C_m	CLM	pitching moment coefficient corrected for orbiter base axial force
$C_{A_{b_O}}$	CABO	orbiter base axial force coefficient
$C_{A_{b_S}}$	CABS	SRB base axial force coefficient
$C_{A_{b_E}}$	CABE	tank base axial force coefficient

ADDITIONS TO NOMENCLATURE

SYMBOL	PLOT SYMBOL	DEFINITION
ET		External tank
F_A		Axial force; lbs.
F_N		Normal force; lbs
F_Y		Side force, lbs.
i_b		Orbiter base average slant angle
i_o		Orbiter incidence angle on external tank, positive when tail down; deg.
M_X		Rolling moment; in-lbs.
M_Y		Pitching moment; in-lbs.
M_Z		Yawing moment; in-lbs.
SRB		Solid rocket booster
T		Temperature; F°
X_s		Solid rocket booster longitudinal location on external tank, zero when SRB is in base line position: in.,
X_1		Axial moment arm for orbiter base drag
Z		Separation distance of orbiter and tank, measured at the aft tie-downs; in.
Z_o		Vertical distance measured from orbiter water line; in.
Z_1		Vertical moment arm for orbiter base axial force; in.
ϕ_s		Solid rocket booster radial location on external tank, measured from top of tank; deg.

CONFIGURATIONS INVESTIGATED

The 0.004 scale test model consisted of an orbiter, external oxygen/hydrogen tank with protuberances plus various orbiter/ET fairings, ramps and attach structure configurations. The orbiter (Rockwell 74-0) and the ET were part of Rockwell model 74-OTS, Vehicle 5 configuration which was tested during NASA Series Test Number IA33 (MSFC TWT 594). The SRB's were designed to the latest configuration and fabricated by MSFC for this investigation. The holddown arm fairings on the engine shrouds were not included on the model because of their small size. All of the models and parts were constructed of stainless steel. The model was mounted by the ET on a straight sting.

The total configuration is shown in Figure 2. External tank protuberances and nose shapes are shown in Figures 3 through 5. The baseline SRB protuberances, attach rings, stiffener rings, and nose cones are shown in Figures 6 through 10. The fairings, ramps and attach structures were constructed of aluminum and are defined in Figures 11 through 23. SRB separation motor fairing configurations are shown in Figures 24 through 26.

The configuration designations used for the test model hardware are as follows:

O_1		Rockwell 74-O Orbiter. Components are as follows:
	B62	Body-per VL70-000200B, 202C, & 203
	C12	Canopy-per VL70-000202C
	R5	Rudder-per VL70-00146A
	V8	Vertical tail-per VL70-000146A
	W127	Wing-per VL70-000200B
	F10	Body flap-per VL70-000200B
	E43	Elevon, 6" gap-per VL70-000200, 00608, 006092
	M16	OMS pods-per VL70-008410, 008401
	N28	OMS nozzle-per VL70-008457
O_2		Stycast plastic orbiter (Rockwell 74-O). Components same as above but without V8 and R5.
T_1		External tank plus all protuberances and attach structures. Components are as follows:
	T20	Tank-per VL78-000041C
	AT16	Attach structure, front ORB/ET-per Rockwell SK-H-4011
	AT17	Attach structure, left rear ORB/ET-per VL78-000062B
	AT18	Attach structure, right rear ORB/ET-per VL78-000062B
	FL5	LOX feed line, ET/ORB-per VL78-000062A
	FL6	LH_2 pressure line, ET/ORB-per VL78-000062A
	FL9	LH_2 feed line, ET/ORB-per VL78-000062A
	FR6	Umbilical door fairing support-per VL78-000062A
	PT12	Tank lightening rod-per VL78-000062A
	PT13	LOX recirculation line-per VL78-000062A

	PT14	LOX pressure line-per VL78-000062A
	PT20	LOX pressure line and electrical conduit-per VL78-000062A
T_2		External tank with alternate nose plus all protuberances and attach structures. Components are as follows:
	T21	Tank with 900" radius ogive noise (see Figure 3).
		All other components same as above.
T_3		External tank with 2nd alternate nose plus all protuberances and attach structures. Components are as follows:
	T22	Tank with modified lightening rod configuration (see Figure 4).
		All other components same as above.
S_1		SRB baseline body and 18° nose cone-per MSFC 10A00319 (see Figure 5).
PS_8		Electrical Tunnel
A_1		Baseline attach ring
R_1		Baseline stiffener rings
K_1		Baseline kick ring
A_2		Attach ring cut down to 4" height (see Figure 6).
A_3		Attach ring cut down to 1.3" height (see Figure 8).
R_2		Stiffener rings cut down to 1.3" height (see Figure 8).
S_2		SRB with 25°/12.5° double angle nose cone (see Figure 5).
S_3		SRB with 25°/9.5° double angle nose cone (see Figure 9).
S_4		SRB with 25°/13.5° double angle nose cone (see Figure 9).
F_1		Streamline forward orbiter attach structure (see Figure 10).

F_2	Orbiter nose fairing (see Figure 11)
F_3	Flow deflector (see Figure 11)
F_4	Long flow deflector (see Figure 11)
F_5	Orbiter/ET 1/4 length fairing (see Figure 12)
F_6	Orbiter/ET 1/2 length fairing (see Figure 12)
F_7	Orbiter/ET 3/4 length fairing (see Figure 12)
F_8	20° ramp attached to ET forward of orbiter nose (see Figure 13)
F_9	10° ramp attached to ET forward of orbiter nose (see Figure 14)
F_{10}	Aft orbiter attach structure fairing (see Figure 15)
F_{11}	SRB nose fairing (see Figure 15)
F_{12}	Orbiter/ET full fairing (see Figure 16)
F_{13}	Forward orbiter/ET attach structure fairing (see Figure 17)
F_{14}	SRB attach ring fairing (see Figure 18)
F_{15}	SRB kick ring and engine skirt fairing (see Figure 18)
F_{16}	SRB stiffener ring fairing (see Figure 18)
F_{17}	Orbiter nose fairing (see Figure 19)
F_{18}	SRB kick ring fairing (see Figure 20)
F_{19}	10° ramp aft position (see Figure 21)
F_{20}	Orbiter/ET mid-fairing, forward (see Figure 22)
F_{21}	Orbiter/ET mid-fairing, middle (see Figure 22)
F_{22}	Orbiter/ET mid fairing, aft (see Figure 22)
PS_{10}	Forward SRB separation motor fairing (see Figure 23)

PS_{11}	Aft SRB separation motor fairing (see Figure 23)
PS_{12}	Forward SRB orthogonal separation motor fairing (see Figure 24)
PS_{13}	Aft SRB orthogonal separation motor fairing (see Figure 24)
PS_{14}	SRB separation motor aft fairing (see Figure 25)

Combinations which were tested are as follows:

$O_1T_1S_1A_1R_1K_1F_1$
$O_1T_1S_1A_1R_1K\ F_2$
$O_1T_1S_1A_1R_1K_1F_3$
$O_1T_1S_1A_1R_1K_1F_4$
$O_1T_1S_1A_1R_1K_1F_5$
$O_1T_1S_1A_1R_1K_1F_6$
$O_1T_1S_1A_1R_1K\ F_7$
$O_1T_1S_1A_1R_1K_1F_8$
$O_1T_1S_1A_1R_1K_1F_9$
$O_1T_1S_1A_1R_1K_1F_{10}$
$O_1T_1S_1A_1R_1K_1F_{11}$
$O_1T_1S_1A_1R_1K_1F_{12}$
$O_1T_1S_1A_1R_1K_1F_{13}$
$O_1T_1S_1A_1R_1K_1F_{14}$
$O_1T_1S_1A_1R_1K_1F_{17}$
$O_1T_1S_1A_1R_1K_1$
$O_1T_1S_2A_1R_1K_1$
$O_1T_1S_2A_1R_1K_1F_{12}$
$O_1T_1S_1A_1R_1K_1PS_{11}$
$O_1T_1S_1A_1R_1K_1PS_{10}PS_{11}$
$O_1T_1S_1A_1R_1K_1PS_{12}PS_{13}$
$O_1T_1S_1A_1R_1K_1F_{10}F_{13}$
$O_1T_1S_1A_1R_1K_1F_{12}F_{11}$

$O_1T_1S_1A_1R_1K_1F_{12}F_{14}$
$O_1T_1S_1A_1R_1K_1F_{14}F_{15}$
$O_1T_1S_1A_1R_1K_1F_{14}F_{15}F_{16}$
$O_1T_1S_1A_1R_1K_1F_{10}F_{11}$
$O_1T_1S_1A_1R_1K_1PS_{14}$
$O_2T_1S_1A_1R_1K_1$
$O_2T_1S_1A_1R_1K_1F_{19}$
$O_2T_1S_1A_1R_1K_1F_{20}$
$O_2T_1S_1A_1R_1K_1F_{21}$
$O_2T_1S_1A_1R_1K_1F_{22}$
$O_2T_2S_1A_1R_1K_1$
$O_2T_3S_1A_1R_1K_1$
$O_2T_1S_2A_1R_1K_1$
$O_2T_1S_3A_1R_1K_1$
$O_2T_1S_4A_1R_1K_1$
$O_2T_1S_1A_2R_1K_1$
$O_2T_1S_1A_3R_1K_1$
$O_2T_1S_1A_3R_2K_1$
$O_2T_1S_1A_3R_2K_1F_{18}$
$O_2T_1S_1A_1R_2K_1$
$O_2T_1S_3A_3R_1K_1$

Tunnel test conditions are given in Table I. Table II shows the various configurations tested and their corresponding test conditions. Model dimensional data are given in Table III. Photographs of the installation of various configurations in the tunnel are shown in Figure 28 through 35.

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and pefforated walls. Mach numbers of 1.44, 1.93 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dew point and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo-actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F. The air then passes through the test section, which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20° (± 10°). Sting offsets are available for obtaining various maximum angles of attack up to 90°.

The diffuser section has movable floor and ceiling panels which are the primary means of controlling the subsonic Mach numbers and permit more efficient running supersonically. The sector assembly and supersonic diffuser telescope into the subsonic diffuser to allow easy access to the model and test section.

Tunnel flow is exhausted through an acoustically damped tower to atmosphere or into the vacuum field of 42,000 cubic feet. The vacuum tanks are evacuated by vacuum pumps driven by a total of 500 hp.

Data are recorded by a solid-state digital data acquisition system. The digital data are transferred to punched cards during the run to be reduced later by a computer to proper coefficient form.

INSTRUMENTATION AND TEST CONDITIONS

The external tank was mounted on balance 239, which was supported on straight sting 102. This sting was mounted in straight extension S-3.

The orbiter was mounted to the ET at three points; one simulated the forward attach point and the remaining two on the aft end of the model were scaled orbiter main fuel lines. The SRB's were also rigidly attached to the tank.

Base pressure was measured at six locations as shown in Figure 27. The tubes from the orbiter were combined as were the two tubes at the base of the ET. This arrangement gave to the data system one set of base pressure inputs each for the orbiter, the ET, and the SRB. Since the primary data output for this test was axial force coefficient, special care was made when locating the pressure tubes and calibrating the base pressure transducers. A dot of ink or paint was placed on the model at the desired measuring points and the base pressure tubes placed directly over these points. This insured accurate placement of the tubes each time they were moved for model changes. Also, the tube ends were located within .025 to .050 of an inch of the model surface.

The Mach number array was 0.6, 0.9, 1.2, 1.96, 3.48, and 4.96. Complete test conditions are presented in Table I. The angle of attack schedule was -5, -3, -2, -1, 0, 1, 2, 3, and 5 degrees for zero side slip.

DATA REDUCTION

All model forces and moments were resolved in the body axis system and presented in the form of nondimensional coefficients. The coefficients are listed below:

$CN^1 = \frac{F_N}{Q\ SREF}$, normal force coefficient uncorrected for base pressure forces

$CLM^1 = \frac{M_Y}{Q\ SREF\ LREF}$, pitching moment coefficient uncorrected for orbiter base axial force

$CY = \frac{F_Y}{Q\ SREF}$, side force coefficient

$CYN = \frac{M_Z}{Q\ SREF\ BREF}$, yawing moment coefficient

$CBL = \frac{M_X}{Q\ SREF\ BREF}$, rolling moment coefficient

$CLM = CLM^1 - CAB_0\ \frac{Z_1}{LREF} + CNB_0\ \frac{X_1}{LREF}$, pitching moment coefficient corrected for orbiter base axial force

$CN = CN^1 - CNB_0$, Normal force coefficient, corrected for orbital base pressure

$CA = \frac{F_A}{Q\ SREF}$, total axial force coefficient

$$CAF = CA - CAB_O - CAB_S - CAB_E, \text{ forebody axial force coefficient}$$

$$CAB_O = - CPB_O \frac{A_{b_O}}{SREF}, \text{ orbiter base axial force coefficient}$$

$$CAB_S = - CPB_S \frac{A_{b_S}}{SREF}, \text{ SRB base axial force coefficient}$$

$$CAB_E = - CPB_E \frac{A_{b_E}}{SREF}, \text{ tank base axial force coefficient}$$

$$CNB_O = - CPB_O \frac{A_{b_O}}{SREF}, \text{ Tan } i_b$$

where:

$$CPB_O = \frac{P_{b_O} - P_\infty}{Q}, \text{ orbiter base pressure coefficient}$$

$$CPB_S = \frac{P_{b_S} - P_\infty}{Q}, \text{ SRB base pressure coefficient}$$

$$CPB_E = \frac{P_{b_E} - P_\infty}{Q}, \text{ tank base pressure coefficient}$$

i_b = 14° - 45', avg. orbiter base slant angle

and Z_1 = 1.344 in., vertical moment arm for orbiter base axial force.

X_1 = 5.052 in., axial moment arm for orbiter base drag

Data were corrected for weight tares and sting deflections.

Model reference dimensions used for data reduction are presented below:

PARAMETER	SYMBOL	FULL SCALE	0.004 SCALE
Reference area	SREF	2690 ft.^{2}	6.198 in.^{2}
Reference length	LREF	1290 in.	5.160 in.
Reference span	BREF	1290 in.	5.160 in.
Orbiter base area	A_{b_O}	436.70 ft.^{2}	1.006 in.^{2}
External tank base area	A_{b_E}	594.68 ft.^{2}	1.370 in.^{2}
SRB base area (2 SRB)	A_{b_S}	472.85 ft.^{2}	1.089 in.^{2}
MRP (from ET nose)		678 in.	2.712 in.
(from ET base)		---	4.709 in.

TABLE I.

TEST : MSFC TWT 600 | DATE : 8-6-75

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.6	5.0×10^6	4.35	100
0.9	6.2×10^6	7.37	100
1.2	6.7×10^6	9.29	100
1.96	7.0×10^6	10.24	100
3.48	6.2×10^6	6.74	140
4.96	4.8×10^6	3.07	140

BALANCE UTILIZED: MSFC 239

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE: (At Q = Lbs/IN^2)
NF	200 Lbs.	± 1.0 Lbs.	± .016
SF	100 Lbs.	± .5 Lb.	± .008
AF	50 Lbs.	± .25 Lb	± .004
PM	196 IN-Lbs.	± 1.0 IN-Lbs.	± .003
RM	98 IN-Lbs.	± .5 IN-Lb.	± .002
YM	50 IN-Lbs.	± .25 IN-Lb.	± .001

COMMENTS: Accuracy based on ± 0.5 percent of balance Full Load capacity.

TABLE II

TEST: TWT 600(FA14) DATA SET/RUN NUMBER COLLATION SUMMARY DATE: 8/8/75

DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES α	β	i_0	Z	ϕ_s	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.6	0.9	1.2	1.96	3.48	4.96	TEST RUN NUMBERS
R1L001	0,T,S,A,R,K,F1	A	0	0	.14	90°		1	2	3	—	98	97	—
002	0,T,S,A,R,K,F2							6	5	4		99	100	~
3	0,T,S,A,R,K,F3							7	8	9		110	109	
4	0,T,S,A,R,K,F4							12	11	10		111	112	
5	0,T,S,A,R,K,F5							13	14	15		102	101	
6	0,T,S,A,R,K,F6							18	17	16		103	104	
7	0,T,S,A,R,K,F7							25	26	27		106	105	
8	0,T,S,A,R,K,F8											114	113	
9	0,T,S,A,R,K,F9											115	116	—
010	0,T,S,A,R,K,F10							30	29	28		87/1	88/1	
11	0,T,S,A,R,K,F11							37	38	39		82/1	81/1	
12	0,T,S,A,R,K,F12							43	44	45		75/1	76/1	
13	0,T,S,A,R,K,F13											90/1	89/1	
14	0,T,S,A,R,K,F14			↓				54	53	52		91/1	92/1	
15	0,T,S,A,R,K,F17			-3°				61	62	63		107	108	
16	0,T,S,A,R,K,			0				19	20	21		70/1	69/1	
17	0,T,S2A,R,K,							24	23	22		71/1	72/1	
018	0,T,S2A,R,K,F12	↓	↓	↓	↓	↓		48	47	46		74/1	73/1	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

CN CLM CY CYN CBL CA CAF CABO CABS CABE 10

α OR β SCHEDULES: α RANGE: A = -5° -3° -2° -1° 0, 1, 2, 3° 5° COEFFICIENTS

IDVAR (1) IDVAR (2) NDV

MSFC - Form 263-2 (Rev. May 1973)

TABLE II (Continued)

TEST: TWT 600 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 8/8/75

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES L_O	PARAMETERS/VALUES Z	PARAMETERS/VALUES ϕ_S	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.6	0.9	1.2	1.96	3.48	4.96	TEST RUN NUMBERS
R1L019	$0,T,S,A,R,K,PS_{11}$	A	0	0	.14	90°						118	117	
20	$0,T,S,A,R,K,PS_{10}PS_{11}$											119	120	
21	$0,T,S,A,R,K,PS_{12}PS_{13}$											122	121	
22	$0,T,S,A,R,K,F_{10}F_{13}$							31	32	33		86/1	85/1	
23	$0,T,S,A,R,K,F_{12}F_{11}$							42	41	40		79/1	80/1	
24	$0,T,S,A,R,K,F_{12}F_{14}$							49	50	51		78/1	77/1	
25	$0,T,S,A,R,K,F_{14}F_{15}$							60	59	58		94	93	
26	$0,T,S,A,R,K,F_{10}F_{11}$							36	35	34		83/1	84/1	
27	$0,T,S,A,R,K,F_{14}F_{15}F_{16}$							55	56	57		95/1	96/1	
28	$0,T,S,A,R,K,PS_{14}$							66	65	64		67/1	68/1	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES — COEFFICENTS — IDVAR (1) IDVAR (2) NDV

MSFC - Form 368-2 (Rev. May 1972)

TABLE II (Continued)

TEST: TWT 600 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 8/8/75

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES l_0	PARAMETERS/VALUES Z	PARAMETERS/VALUES ϕ_s	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.6	0.9	1.2	1.96	3.48	4.96	TEST RUN NUMBERS
R1L029	$O_2T_1S_1A_1R_1K_1$	A	0	0	.14	90°		123/2	124/3	125/2	176	177/1	178	
30	$O_2T_1S_1A_1R_1K_1F19$	↓	↓	↓	↓	↓		159	160	161				
31	$O_2T_1S_1A_1R_1K_1F20$							164	163	162				
32	$O_2T_1S_1A_1R_1K_1F21$							165	166	167				
33	$O_2T_1S_1A_1R_1K_1F22$							170	169	168				
34	$O_2T_2S_1A_1R_1K_1$							146	145	144				
35	$O_2T_3S_1A_1R_1K_1$							141	142	143				
36	$O_2T_1S_2A_1R_1K_1$							147	148	149				
37	$O_2T_1S_3A_1R_1K_1$							152	151	150				
38	$O_2T_1S_4A_1R_1K_1$							153/1	154	155				
39	$O_2T_1S_1A_2R_1K_1$							128/1	127/2	126/2	172	180	179	
40	$O_2T_1S_1A_3R_1K_1$							129/3	130/2	131/2	171	181	182	
41	$O_2T_1S_1A_3R_2K_1$							134	133	132	173	184	183	
42	$O_2T_1S_1A_3R_2K_1F18$							135	136	137	174	185	186	
43	$O_2T_1S_1A_1R_2K_1$							140	139	138	175	188	187	
44	$O_2T_1S_3A_3R_2K_1$	↓	↓	↓	↓	↓		158	157	156				

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES: A = −5°, −3°, −2°, −1°, 0, 1°, 2°, 3°, 5° COEFFICENTS

IDVAR (1) IDVAR (2) NDV

MSFC - Form 268-2 (Rev. May 1973)

TABLE III. MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B_{62}

GENERAL DESCRIPTION : Configuration 140 C/D orbiter fuselage, MCR 200-R_4. Similar to 140 A/B fuselage except aft body revised and improved midbody-wing-boot fairing, X_o = 940 to X_o = 1040.

MODEL SCALE: 0.004

DRAWING NUMBER : VL70-000140C, -000202C, 000205A, -000200B, -000203A.

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (IML: Fwd Sta. X_o=238), In.	1290.3	5.161
Length (OML: Fwd Sta X_o=235), In.	1293.3	5.173
Max Width(@ X_o = 1528.3), In.	264.0	1.056
Max Depth (@ X_o = 1464), In.	250.0	1.000
Fineness Ratio	4.899	4.899
Area - Ft^2		
Max. Cross-Sectional	340.885	0.0055
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT : CANOPY - C_{12}

GENERAL DESCRIPTION : Configuration140 C/D orbiter canopy. vehicle cabin No. 31 updated to MCR 200-R_4: Used with fuselage B_{62}.

MODEL SCALE: 0.004

DRAWING NUMBER : VL70-000140C, -000202B, -000204

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o= 434.643-578), in.	143.357	0.573
Max Width (@ X_o = 513.127), In.	152.412	0.610
Max Depth (Z_o=501 to 449.39), In.	51.61	0.206
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: R5 - Rudder

GENERAL DESCRIPTION: 2A and 3 configuration per Rockwell lines VL70-000095 and VL70-000139

Scale Model = .004

DRAWING NUMBER: VL70-000139 VL70-000095

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area ~ Ft^2	106.38	0.00170
Span (equivalent) ~ IN.	201.0	0.8040
Inb'd equivalent chord	91.585	0.36634
Outb'd equivalent chord	50.833	0.20333
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.83	34.83
Tailing Edge	26.25	26.25
Hingeline	34.83	34.83
Area Moment (Normal to hinge line) Ft^3 Product of area and mean chord	526.13	0.00003

*REVISED 4/24/74

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: VERTICAL - V_8

GENERAL DESCRIPTION: Configuration 140C/D orbiter vertical tail (identical to configuration 140A/B vertical tail).

MODEL SCALE: 0.0040

DRAWING NUMBER: VL70-000140C, -000146B

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft^2		
Planform	413.253	0.0068
Span (Theo) - In.	315.720	1.263
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep-Back Angles, Degrees.		
Leading Edge	45.000	45.000
* Trailing Edge	26.2	26.2
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.500	1.074
Tip (Theo) WP	108.470	0.434
MAC	199.808	0.799
Fus. Sta. of .25 MAC	1463.50	5.854
W.P. of .25 MAC	635.522	2.542
B.L. of .25 MAC	0.000	0.000
Airfoil Section		
Leading Wedge Angle - Deg.	10.000	10.000
Trailing Wedge Angle - Deg.	14.920	14.920
Leading Edge Radius	2.00	0.008
Void Area	13.17	0.00021
Blanketed Area	0.00	0.000

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: WING-W 127

GENERAL DESCRIPTION: Configuration 140C/D orbiter wing, MCR 200-E4, similar to 140A/B wing W_{116} but with refinements: improved wing-boot-midbody fairing (X_o = 940 to X_o = 1040); elevon split line relocated from Y_o=281 to Y_o=312.5.

MODEL SCALE: 0.0040

TEST NO.

DWG. NO. VL70-000140C, -000200B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2	2690.00	0.043
Planform	936.68	3.747
Span (Theo In.	2.265	2.265
Aspect Ratio	1.177	1.177
Rate of Taper	0.200	0.200
Taper Ratio	3.500	3.500
Dihedral Angle, degrees	0.500	0.500
Incidence Angle, degrees	3.000	3.000
Aerodynamic Twist, degrees		
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	-10.056	-10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.0.0.	689.24	2.757
Tip, (Theo) B.P.	137.85	0.551
MAC	474.81	1.899
Fus. Sta. of .25 MAC	1136.83	4.547
W.P. of .25 MAC	290.58	1.162
B.L. of .25 MAC	182.13	0.729
EXPOSED DATA		
Area (Theo) Ft^2	1751.50	7.006
Span, (Theo) In. BP108	720.68	2.883
Aspect Ratio	2.059	2.059
Taper Ratio	0.245	0.245
Chords		
Root BP108	562.09	2.248
Tip 1.00 $\frac{b}{2}$	137.85	0.551
MAC	392.83	1.531
Fus. Sta. of .25 MAC	1185.98	4.744
W.P. of .25 MAC	294.30	1.177
B.L. of .25 MAC	251.77	1.007
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root $\frac{b}{2}$ =	0.113	0.113
Tip $\frac{b}{2}$ =	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff Planform Area Ft^2	113.18	0.453
Leading Edge Intersects Fus M. L. @ Sta	500.00	2.000
Leading Edge Intersects Wing @ Sta	1024.00	4.096

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TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT : BODY FLAP - F_{10}

GENERAL DESCRIPTION : Configuration 140C/D body flap. Hingeline located at X_o = 1532, Z_o = 238.

MODEL SCALE: 0.0040

DRAWING NUMBER : VL70-000140C, VL70-355114

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o=1525.5 to X_o=1613), In.	87.50	0.350
Max Width (@ L.E., X_o = 1525.5), In.	256.00	1.024
Max Depth (X_o = 1532), In.	19.798	0.792
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional (@H.L.)	35.196	0.00056
Planform	135.00	0.0022
Wetted		
Base (X_o = 1613)	4.89	0.000078

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT : ELEVON - E_{43}

GENERAL DESCRIPTION : Configuration 140A/R orbiter elevons. Data are for one side. E_{43} is 6" F. S. slotted gap version of E_{26}. gaps at inboard end of elevon and at Y_o = 311.0

MODEL SCALE: 0.0040 MODEL DRAWING: R8006, Elevons Lockheed Missile & Space Co. Huntsville, Ala.

DRAWING NUMBER VL70-000200, -006089, -006092

DIMENSIONS	FULL SCALE	MODEL SCALE
Area - Ft^2	210.0	0.003
Span (equivalent), In.	349.2	1.397
Inb'd equivalent chord, In.	118.004	0.472
Outb'd equivalent chord, In.	55.192	0.221
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.2096	0.2096
At Outb'd equiv. chord	0.4004	0.4004
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Trailing Edge	- 10.056	-10.056
Hingeline	0.00	0.00
(Product of Area & $\bar{c}$) Area Moment, Ft^3	1587.25	0.001
Mean Aerodynamic Chord	90.7	0.363

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TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT : OMS POD - M_{16}

GENERAL DESCRIPTION : Configuration 140C orbiter OMS pod - short pod.

MODEL SCALE: 0.0040

DRAWING NUMBER : VL70-008401, VL70-008410 - plus ½" added to simulate TPS

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta X_o=1310.5), In.	258.50	1.034
Max Width (@ X_o = 1511), In.	136.8	0.547
Max Depth (@ X_o = 1511), In.	74.70	0.299
Fineness Ratio	2.484	2.484
Area - Ft^2		
Max. Cross-Sectional	58.865	0.0094
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: OMS NOZZLES - N_{28}

GENERAL DESCRIPTION: Configuration 140A/B Orbiter OMS nozzles.

MODEL SCALE: 0.0040

DRAWING NUMBER: VL70-000140A (Location); SS-A00106, RELEASE 5 (Contour)

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane		
Throat to Exit Plane		
Diameter - In.		
Exit		
Throat		
Inlet		
Area - ft^2		
Exit		
Throat		
Gimbal Point (Station) - In.		
Upper Left Nozzle		
X	1518.0	6.072
Y	- 88.0	- 0.352
Z	492.0	1.968
Right Lower Nozzles		
X	1518.00	6.072
Y	88.0	0.352
Z	492.0	1.968
Null Position - Deg.		
Left Upper Nozzle		
Pitch	$15^{o}49'$	$15^{o}49'$
Yaw	$12^{o}17'$	$12^{o}17'$
Right Lower Nozzle		
Pitch	$15^{o}49'$	$15^{o}49'$
Yaw	$12^{o}17'$	$12^{o}17'$

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT : EXTERNAL TANK - T_{20}

GENERAL DESCRIPTION : External Oxygen-Hydrogen tank WITH 600" CIRCULAR ARC OGIVE NOSE.

MODEL SCALE: 0.0040

DRAWING NUMBER : VL72-000131, VL78-000062 B

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length, In. (Nose @ X_o=328.92)	1846.905	7.388
Max Width Dia, In. @ X_o=975.675	333.2	1.333
Max Depth , In.	333.2	1.333
Fineness Ratio	5.65713	5.65713
Area - Ft^2		
Max. Cross-Sectional	605.534	0.0096
Major Cross section	594.679	0.0095
WP of tank centerline (Z), In.	400.000	0.0064
Base (on 330.2 dia.)	594.679	0.0095

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_{16}

GENERAL DESCRIPTION: Forward orbiter/ET attach structure (2 member structure)

MODEL SCALE: 0.0040 MODEL DRAWING: SS-A00117

DRAWING NO.: VL78-000062B, SK-H-4011

DIMENSIONS:	MEMBER		FULL SCALE	MODEL SCALE
	#1	X_o	394.38	1.578
		Y_o	0.00	0.00
		Z_o	LWR ML	LWR ML
		X_T	1131.00	4.524
		Y_T	561.298	0.187
		Z_T	561.298	2.245
	#2	X_o	394.38	1.578
		Y_o	0	0
		Z_o	LWR ML	LWR ML
		X_T	1131.00	4.524
		Y_T	- 46.8	0.187
		Z_T	561.298	2.245
Diameter of members: (In.)			5.70	0.0228

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_{17}

GENERAL DESCRIPTION: Left rear orbiter/ET attach structure (2 member structure)

MODEL SCALE: 0.004

DRAWING NO.: VL78-000062B, SK-H-4013. MODEL DRAWING: SS-A00117

DIMENSIONS:	MEMBER		FULL SCALE	MODEL SCALE
	#1	X_o	1317	5.258
		Y_o	- 96.5	-0.386
		Z_o	267.5	1.070
		X_T	2058.0	8.232
		Y_T	- 125.827	-0.503
		Z_T	515.5	2.062
	#2	X_o	1317.0	5.258
		Y_o	- 96.5	-0.386
		Z_o	267.5	1.070
		X_T	2058.0	8.232
		Y_T	- 125.827	-0.503
		Z_T	515.5	2.062

Diameter of Members: #1 11.5 In. Dia. F.S.

#2 15.5 In. Dia. F.S.

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_{18}

GENERAL DESCRIPTION: Right rear orbiter/ET attach structure (3 member structure)

MODEL SCALE: 0.004

DRAWING NO.: VL78-000062B, SK-H-4013 MODEL DRAWING: SS-A00117

DIMENSIONS:	MEMBER		FULL SCALE	MODEL SCALE
	#1	X_O	1317.00	5.258
		Y_O	+ 96.5	+ .386
		Z_O	267.5	1.070
		X_T	1872.0	7.488
		Y_T	+ 125.827	+0.503
		Z_T	515.5	2.062
	#2	X_O	1317.0	5.258
		Y_O	+ 96.5	+0.386
		Z_O	267.5	1.070
		X_T	2058.0	8.232
		Y_T	+ 125.827	0.503
		Z_T	515.5	2.062
	#3	X_O	1317.0	5.258
		Y_O	54.40	0.218
		Z_O	19.30	0.077
		X_T	2058.0	8.232
		Y_T	2.5	0.010
		Z_T	567.6	2.270
Diameter of Members: (In.)	#1		15.5	
	#2		11.5	
	#3		4.5	

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: FEEDLINE - FL_5

GENERAL DESCRIPTION: LOX feedline simulated between ET and Orbiter.

MODEL SCALE: 0.0040 MODEL DRAWING: SS-A00117

DRAWING NO.: VL78-000062B

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1033.3	4.132
	Y_T	70.0	0.280
	X_T	1033.3	4.132
	Y_T	- 70.0	- 0.280
Trailing edge at:	X_T	2071.50	8.286
	Y_T	70.00	0.280
	X_T	2071.50	8.286
	Y_T	70.00	0.280
Diameter, In.		18.80	0.188

Centerline of LOX feedline located radially at $\phi = 23^{\circ}24'$

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: PRESSURE LINE - FL_6

GENERAL DESCRIPTION: Max. cross-sectional area simulating LH_2 pressure line and electrical conduit box between ET and Orbiter.

MODEL SCALE: 0.0040

DRAWING NO.: VL78-000062B MODEL DRAWING: SS-A00117

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1127.1	4.508
	Y_T	110.3	0.441
Trailing edge at:	X_T	2062.1	8.248
	Y_T	110.3	0.441

Centerline of LH pressure line located radially at $\phi = 33^{o}45'$.

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT : LH_2 UMBILICAL FEEDLINE - FL_9

GENERAL DESCRIPTION : LH_2 Umbilical Feedline with an electrical quick-disconnect box between the Orbiter and ET.

MODEL SCALE: 0.0040

DRAWING NUMBER : VL78-000062B

DIMENSIONS :	FULL SCALE	MODEL SCALE
Centerline at X	2071.5	8.286
Max Width	31.2	0.125
Max Depth	37.5	0.150
Diameter	17.0	0.068
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: REAR ATTACH STRUCTURE FAIRING - FR_6

GENERAL DESCRIPTION: Rear ET/Orbiter attach structure cross-member or beam fairing used in conjunction with AT_{12}, AT_{13}, FL_1 and FL_2.

MODEL SCALE: 0.0040

DRAWING NO.: VL78-000062B MODEL DRAWING: SS-A01256

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge centerline at	X_T	2036.67	8.147
	Y_T	0.00	0.00
	Z_T	183.00	0.732
Maximum length, In.		64.00	0.256
Maximum width, In.		190.00	0.760

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: ET PROTUBERANCE - PT_{12}

GENERAL DESCRIPTION: Lightning rod attached to ET nose.

MODEL SCALE: 0.004

DRAWING NO.: VL78-000068A

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length	30.90	0.124
Diameter, In.	3.20	0.013

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: ET PROTUBERANCE - PT_{13}

GENERAL DESCRIPTION: Maximum cross-sectional area simulating LOX recirculation line and electrical conduit box on planform view of External Tank, T_{20}.

MODEL SCALE: 0.0040 MODEL DRAWING: SS-A00117

DRAWING NO.: VL78-000062B

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1208.3	4.833
	Y_T	+ 95.0	+ 0.380
	X_T	1208.3	4.833
	Y_T	- 95.0	- 0.380
Trailing edge at:	X_T	2060.5	8.242
	Y_T	95.0	0.380
	X_T	2060.5	8.242
	Y_T	- 95.0	- 0.380

Centerline of LOX recirculation line located radially at $\phi = 33^{\circ}45'$.

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: ET PROTUBERANCE - PT_{14}

GENERAL DESCRIPTION: LOX pressure line on Tank T_{20}.

MODEL SCALE: 0.0040

DRAWING NO.: VL78-000062B

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	355.90	1.424
	Y_T	6.0	0.024
Trailing edge at:	X_T	2060.5	8.242
	Y_T	87.0	0.348

Centerline of LOX pressure line located radially at $\phi = 23^{o}24'$.

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: NOSE CONE LINES - PT_{20}

GENERAL DESCRIPTION: Maximum cross-sectional area simulating the LOX pressure line and electrical conduit on top of external tank (T_{20}) nose cone area.

MODEL SCALE: 0.0040

DRAWING NO.:

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	360.92	1.444
	Y_T	34.0	0.136
Trailing edge at:	X_T	955.1	3.820
	Y_T	336.5	1.346

Centerline of lines located radially at $\phi = 33^{\circ}45'$.

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: BODY - EXTERNAL TANK - T_{21}

GENERAL DESCRIPTION: EXTERNAL OXYGEN-HYDROGEN TANK WITH 900" RADIUS, circular arc OGIVE NOSE.

MODEL SCALE: 0.0040

DRAWING NUMBER: VL72-000131, VL78-000062B, MSFC TBL 0041

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length, ~~X~~ IN.	1825.225	7.301
Max. Width, inches	333.2	1.333
Max. Depth, inches	333.2	1.333
Fineness Ratio	5.527	5.527
Area, ft^2		
Max. Cross-Sectional	605.534	0.0096
Planform		
~~Wetted~~ WP of TANK $\mathcal{L}$ (Z), IN.	400.000	0.0064
Base	594.679	0.0095

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: BODY - EXTERNAL TANK - T22

GENERAL DESCRIPTION: EXTERNAL OXYGEN-HYDROGEN TANK WITH 600" RADIUS CIRCULAR ARC OGIVE NOSE WITH MODIFIED LIGHTNING ROD.
MODEL SCALE : 0.0040

DRAWING NUMBER: SEE FIGURE 5

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length, IN.	1846.225	7.385	
Max. Width, INCHES	333.2	1.333	
Max. Depth, INCHES	333.2	1.333	
Fineness Ratio	5.590	5.590	
Area, ft^2			
Max. Cross-Sectional	605.534	0.0096	
Planform			
~~Wetted~~ WP of TANK ℄ (Z), IN.	400.000	0.0064	
Base	594.679	0.0095	

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: BODY - S1 BOOSTER SOLID ROCKET MOTOR

GENERAL DESCRIPTION: SPHERICALLY BLUNTED CONE/CYLINDER/FLARE BODY OF REVOLUTION. CONFIGURATION PER MSFC DRAWING 10A00319. DATA FOR (1) OF (2) SIDES. MODEL SCALE ~~SCALE MODEL~~: 0.040

DRAWING NUMBER: MSFC 10A00319

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length	1789.6 IN.	7.158 IN.	
Max. Width	146.0 IN.	0.584 IN.	
Max. Depth	146.0 IN.	0.584 IN.	
Fineness Ratio	12.25	12.25	
Area			
Max. Cross-Sectional	116.20 ~~FT.~~ $IN.^2$	0.268 $IN.^2$	
Planform			
Wetted			
Base	236.42 $FT.^2$	0.544 $IN.^2$	

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: PSB - ELECTRICAL TUNNEL

GENERAL DESCRIPTION: ELECTRICAL TUNNEL FAIRING LOCATED ON OUTBOARD SIDE OF EACH SRB. PER MSFC DRAWING 10A00319.
SCALE: 0.004

DRAWING NUMBER: MSFC 10A00319

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
	FULL-SCALE	MODEL SCALE	MODEL SCALE
Area			
Span (equivalent)		(SEE FIGURE 6.)	
Inb'd equivalent chord			
Outb'd equivalent chord			
Ratio movable surface chord/ total surface chord			
At Inb'd equiv. chord			
At Outb'd equiv. chord			
Sweep Back Angles, degrees			
Leading Edge			
Tailing Edge			
Hingeline			
Area Moment (Normal to hinge line)			

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: SRB A1 – BASELINE ATTACH RING.

GENERAL DESCRIPTION: STRUCTURAL RING FOR TAKING LOADS OF ~~SR~~ AFT SRB/ET ATTACH STRUCTURE.

MODEL SCALE : 0.004

DRAWING NUMBER: MSFC 10A00319 (See FIGURE 6)

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
	FULL SCALE	MODEL SCALE	MODEL SCALE
Area			
Span (equivalent)			
Inb'd equivalent chord			
Outb'd equivalent chord			
Ratio movable surface chord/ total surface chord			
At Inb'd equiv. chord			
At Outb'd equiv. chord			
Sweep Back Angles, degrees			
Leading Edge			
Tailing Edge			
Hingeline			
Area Moment (Normal to hinge line)			

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: SRB R1 – BASELINE, STIFFNER RINGS

GENERAL DESCRIPTION: STRUCTURAL RINGS ON AFT SECTION OF SRB.

MODEL SCALE: 0.004

DRAWING NUMBER: MSFC 10A00319 (See FIGURE 6)

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
	FULL SCALE	MODEL SCALE	MODEL SCALE
Area			
Span (equivalent)			
Inb'd equivalent chord			
Outb'd equivalent chord			
Ratio movable surface chord/ total surface chord			
At Inb'd equiv. chord			
At Outb'd equiv. chord			
Sweep Back Angles, degrees			
Leading Edge			
Tailing Edge			
Hingeline			
Area Moment (Normal to hinge line)			

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: K1 - SRB KICK RING

GENERAL DESCRIPTION: AFT STRUCTURAL RING ON SRB.

MODEL SCALE: 0.004

DRAWING NUMBER: MSFC 10A00319 (SEE FIGURE 6)

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
	FULL SCALE	MODEL SCALE	MODEL SCALE
Area			
Span (equivalent)			
Inb'd equivalent chord			
Outb'd equivalent chord			
Ratio movable surface chord/ total surface chord			
At Inb'd equiv. chord			
At Outb'd equiv. chord			
Sweep Back Angles, degrees			
Leading Edge			
Tailing Edge			
Hingeline			
Area Moment (Normal to hinge line)			

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: BODY - S2 BOOSTER SOLID ROCKET MOTOR

GENERAL DESCRIPTION: SPHERICALLY BLUNTED 25°/12.5° DOUBLE ANGLE NOSE CONE/CYLINDER/FLARE BODY OF REVOLUTION. CONFIGURATION PER MSFC DRAWING 10A00319 AND SKETCH 10111. DATA FOR (1) OF (2) SIDES. MODEL SCALE: 0.0040

DRAWING NUMBER: MSFC 10A00319 AND SKETCH 10111 (SEE FIGURE 6).

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length, IN.	1789.6	7.158	
Max. Width, IN.	146.0	0.584	
Max. Depth, IN.	146.0	0.584	
Fineness Ratio	12.25	12.25	
Area			
Max. Cross-Sectional	116.20 ft^2	0.268 IN^2	
Planform			
Wetted			
Base	236.42 ft^2	0.544 IN^2	

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: BODY - S3 BOOSTER SOLID ROCKET MOTOR

GENERAL DESCRIPTION: SPHERICALLY BLUNTED 25°/9.5° DOUBLE ANGLE NOSE CONE/CYLINDER/FLARE BODY OF REVOLUTION. DATA FOR (1) OF (2) SIDES. MODEL SCALE: 0.0040

DRAWING NUMBER: MSFC 10A00319 AND SKETCH 10111 (SEE FIGURE 10)

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length, IN.	1779.1	7.116	
Max. Width, IN.	146.0	0.584	
Max. Depth, IN.	146.0	0.584	
Fineness Ratio	12.18	12.18	
Area			
Max. Cross-Sectional	116.20 ft.^{2}	0.268 IN.^{2}	
Planform			
Wetted			
Base	236.42 ft.^{2}	0.544 IN.^{2}	

TABLE III. MODEL DIMENSIONAL DATA (Concluded)

MODEL COMPONENT: BODY - S4 BOOSTER SOLID ROCKET MOTOR

GENERAL DESCRIPTION: SPERICALLY BLUNTED 25°/13.5° DOUBLE ANGLE NOSE CONE/CYLINDER/FLARE BODY OF REVOLUTION. DATA FOR (1) OF (2) SIDES.

MODEL SCALE : 0.0040

DRAWING NUMBER: MSFC 10A00319 AND SKETCH 10111 (see FIGURE 10).

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length, IN.	1789.6	7.158	
Max. Width, IN.	146.0	0.584	
Max. Depth, IN	146.0	0.584	
Fineness Ratio	12.25	12.25	
Area			
Max. Cross-Sectional	116.20 ft.^{2}	0.268 in.^{2}	
Planform			
Wetted			
Base	236.42 ft.^{2}	0.544 in.^{2}	

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

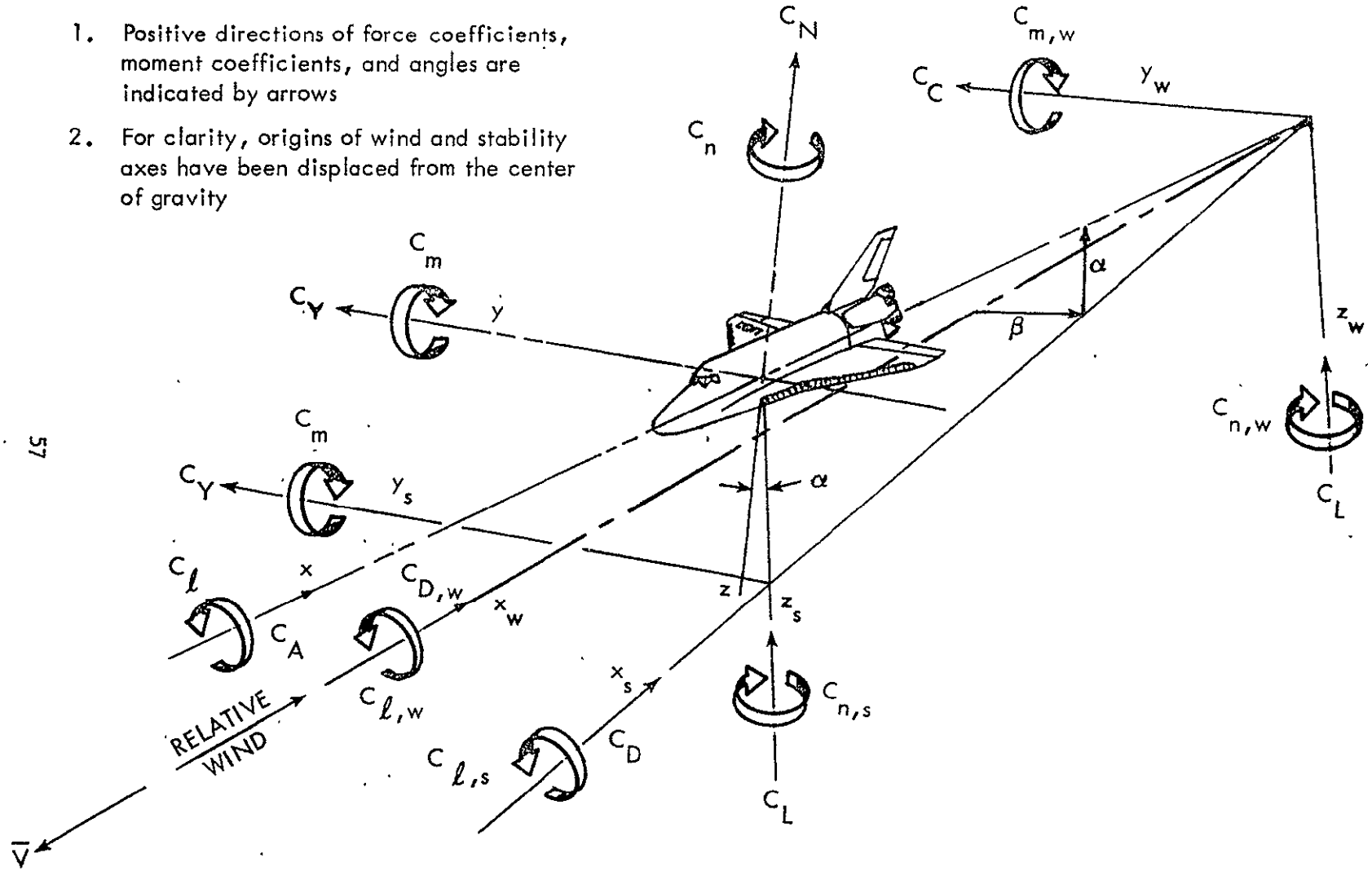


Figure 1. Axis System.

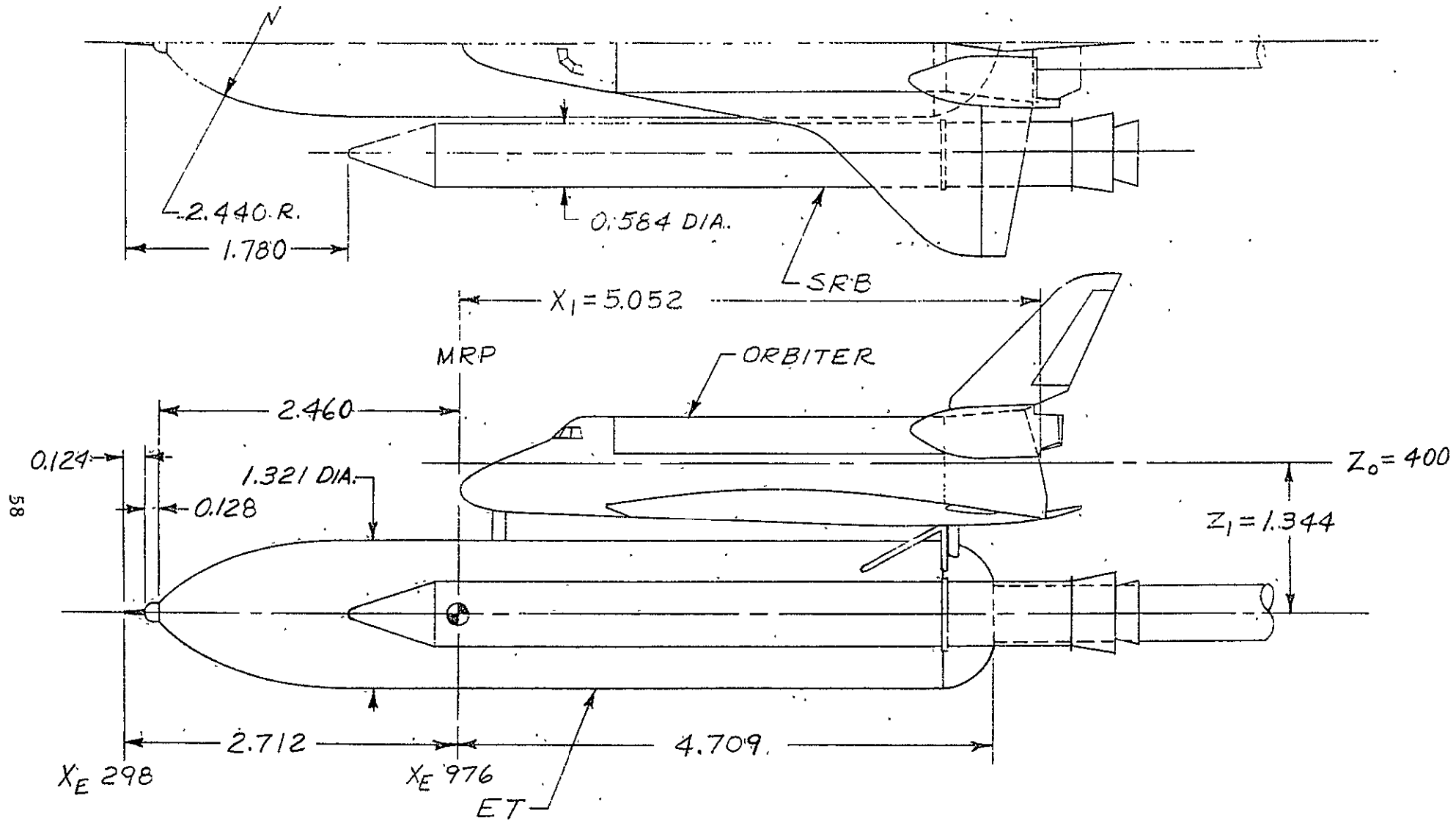


Figure 2. General Arrangement of Launch Vehicle Model.

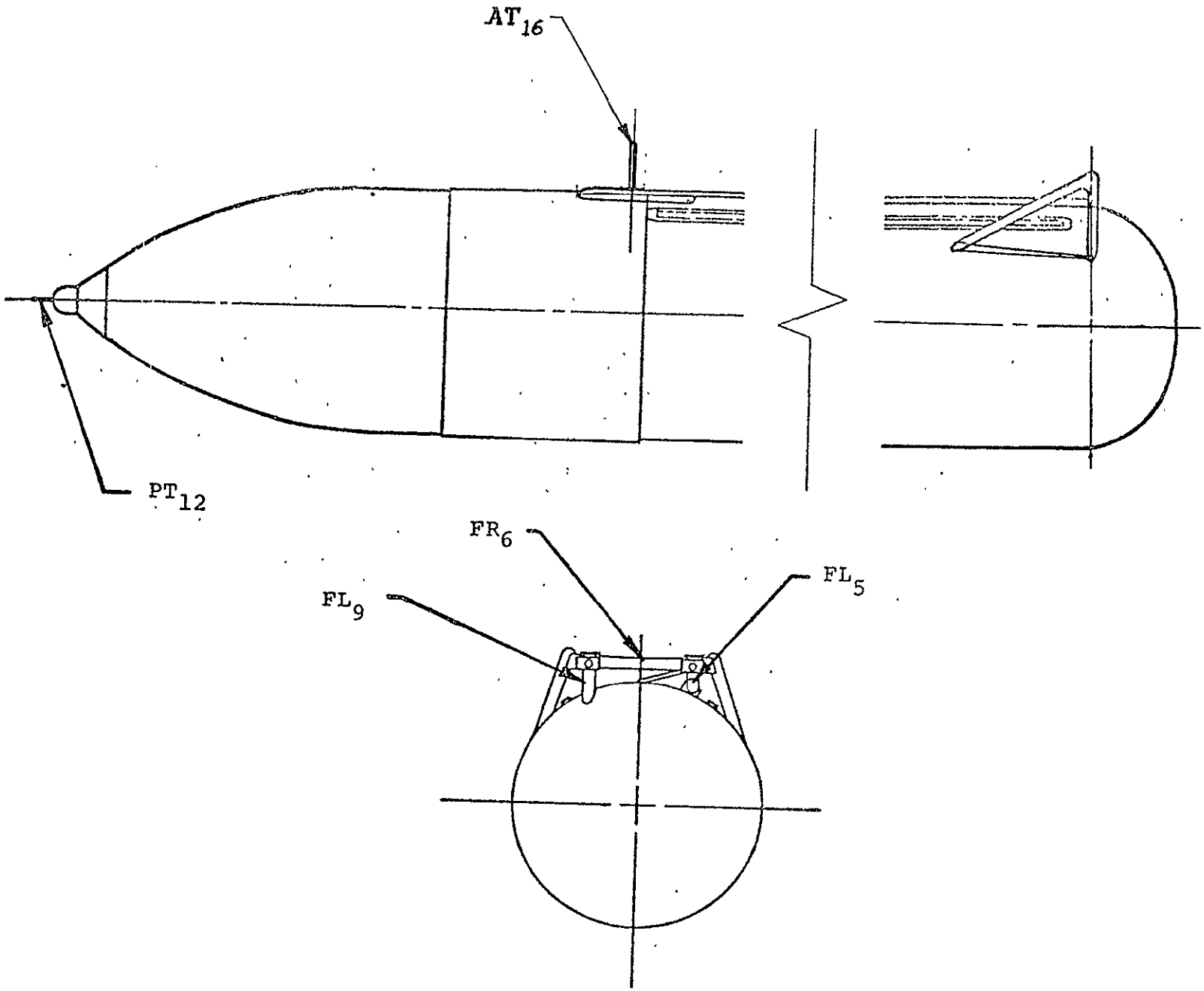


Figure 3. Tank (T_{20}) Protuberances.

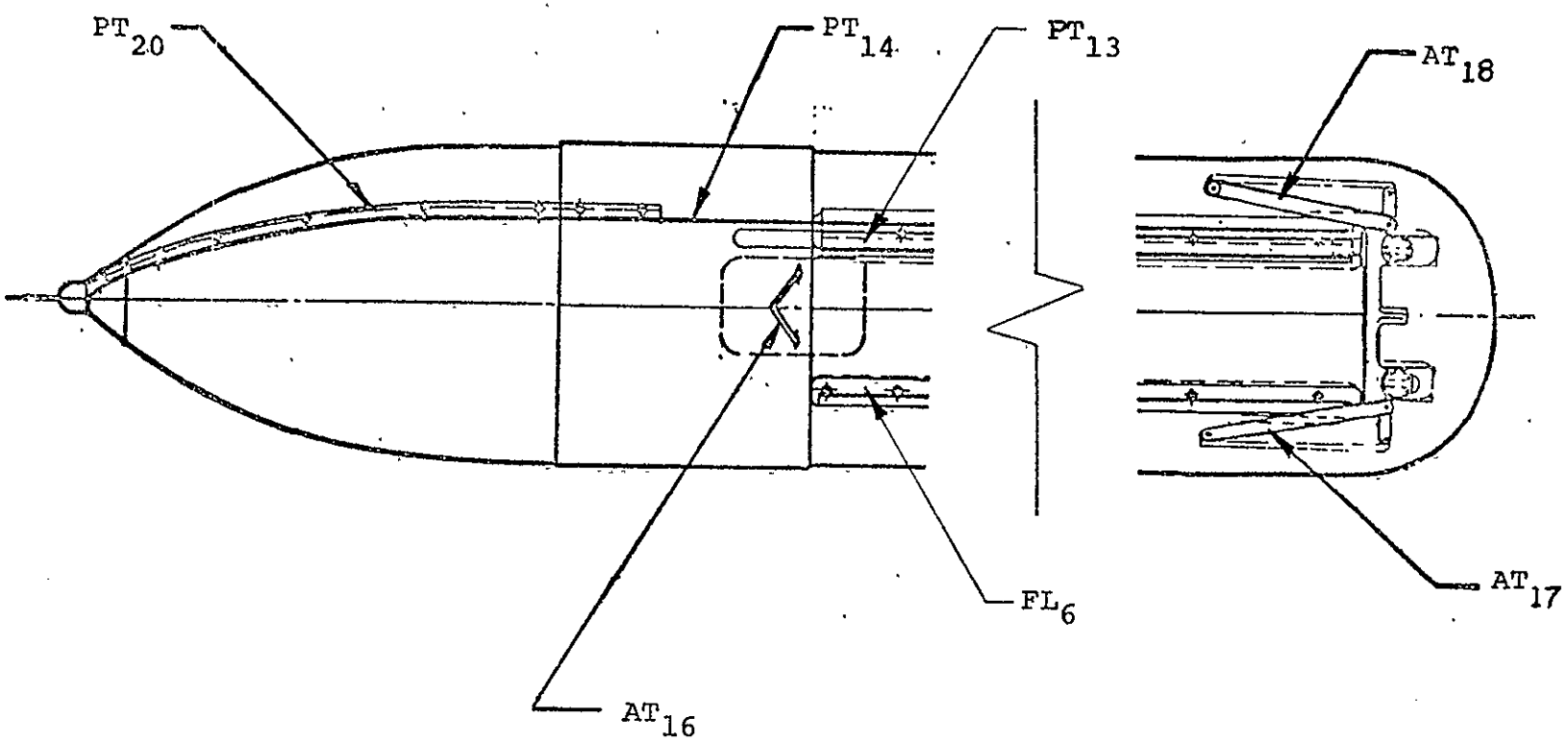


Figure 3. Tank (T_{20}) Protuberances (Continued).

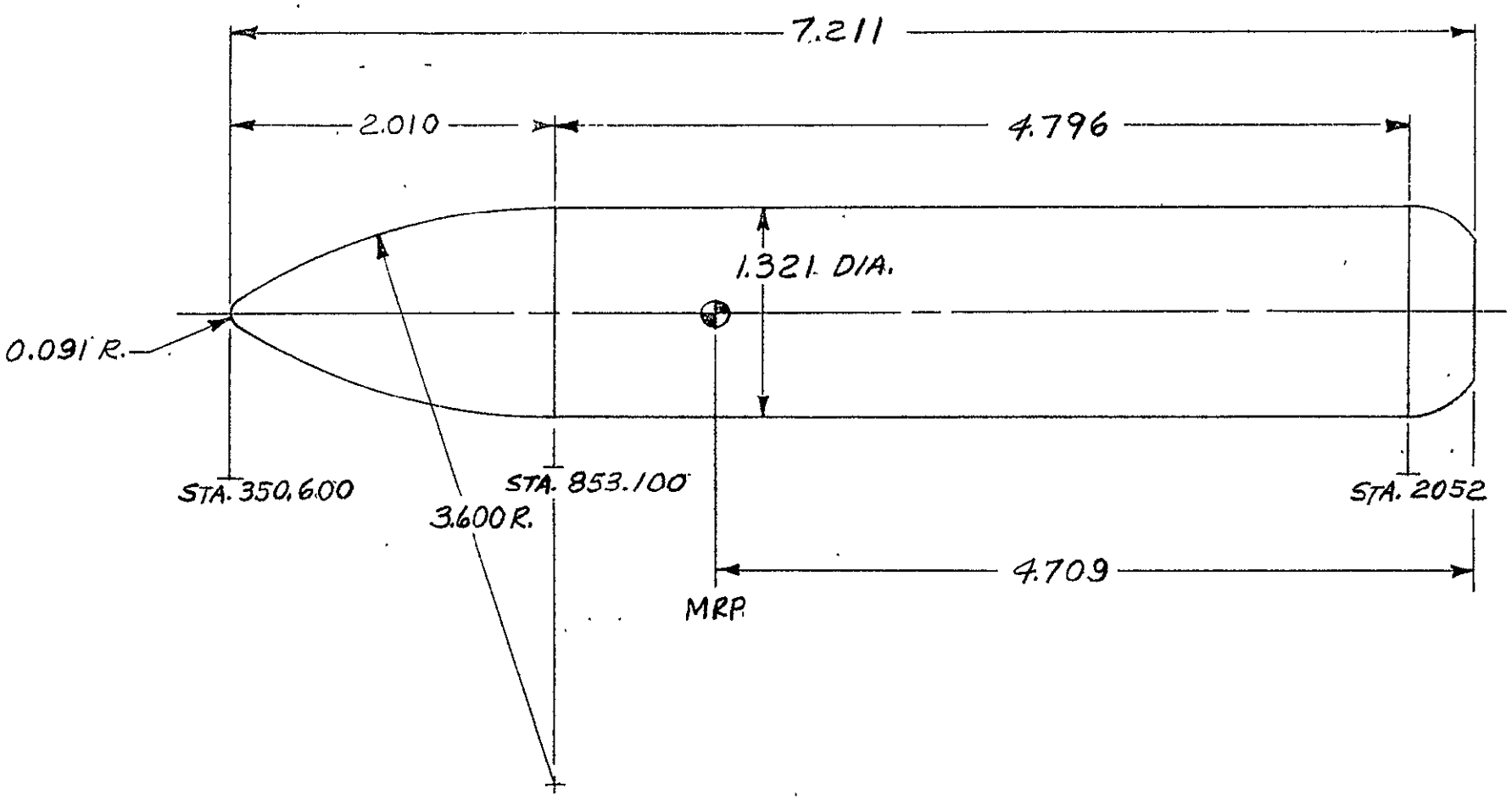


Figure 4. ET with Alternate Nose Shape, T_{21}.

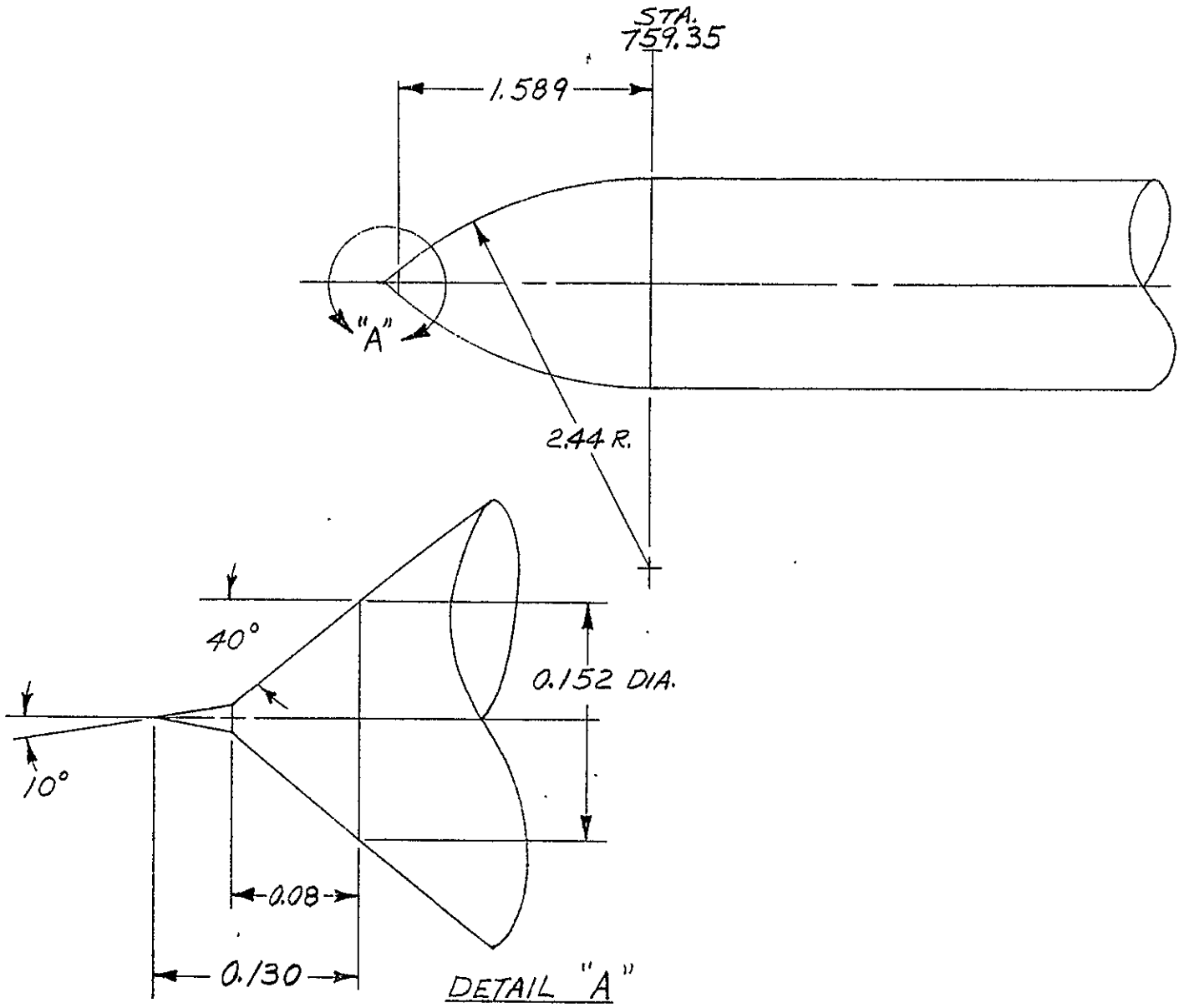


Figure 5. ET with Alternate Nose Shape, T_{22}.

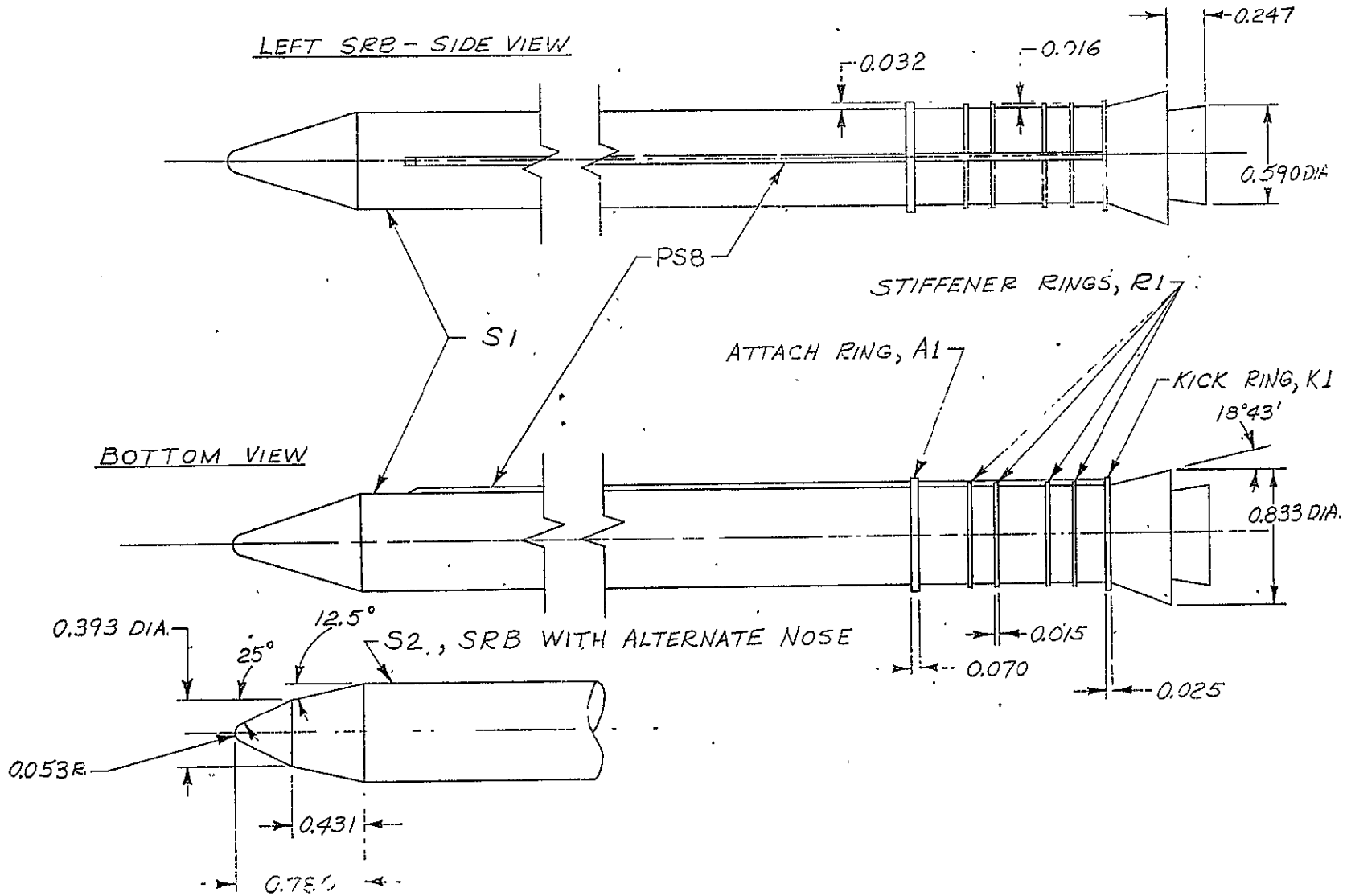


Figure 6. Baseline SRB with Protuberances, PS8, A1, R1, K1, and S2 (SRB with Alternate Nose).

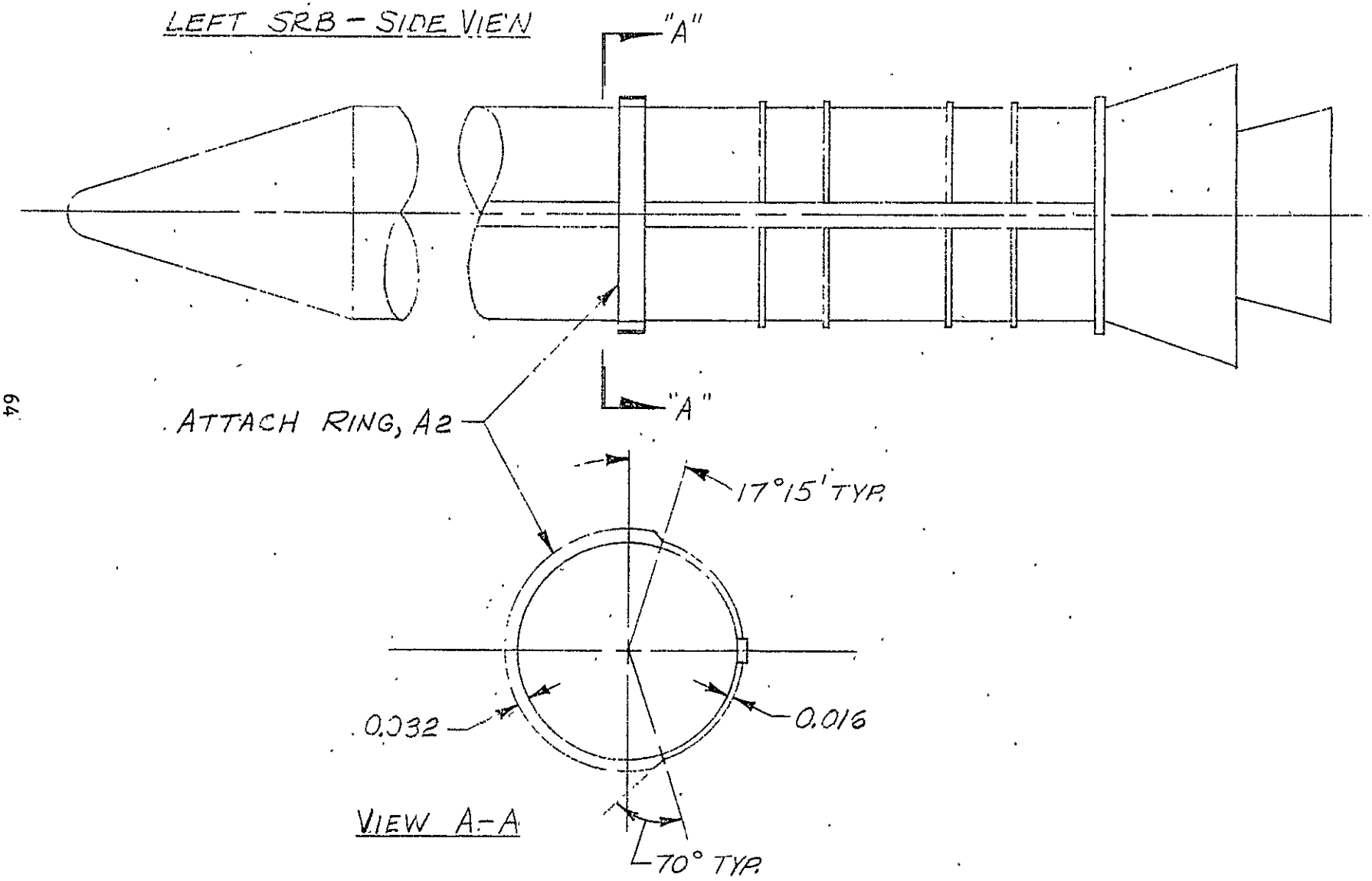


Figure 7. SRB with Modified Attach Ring, A2.

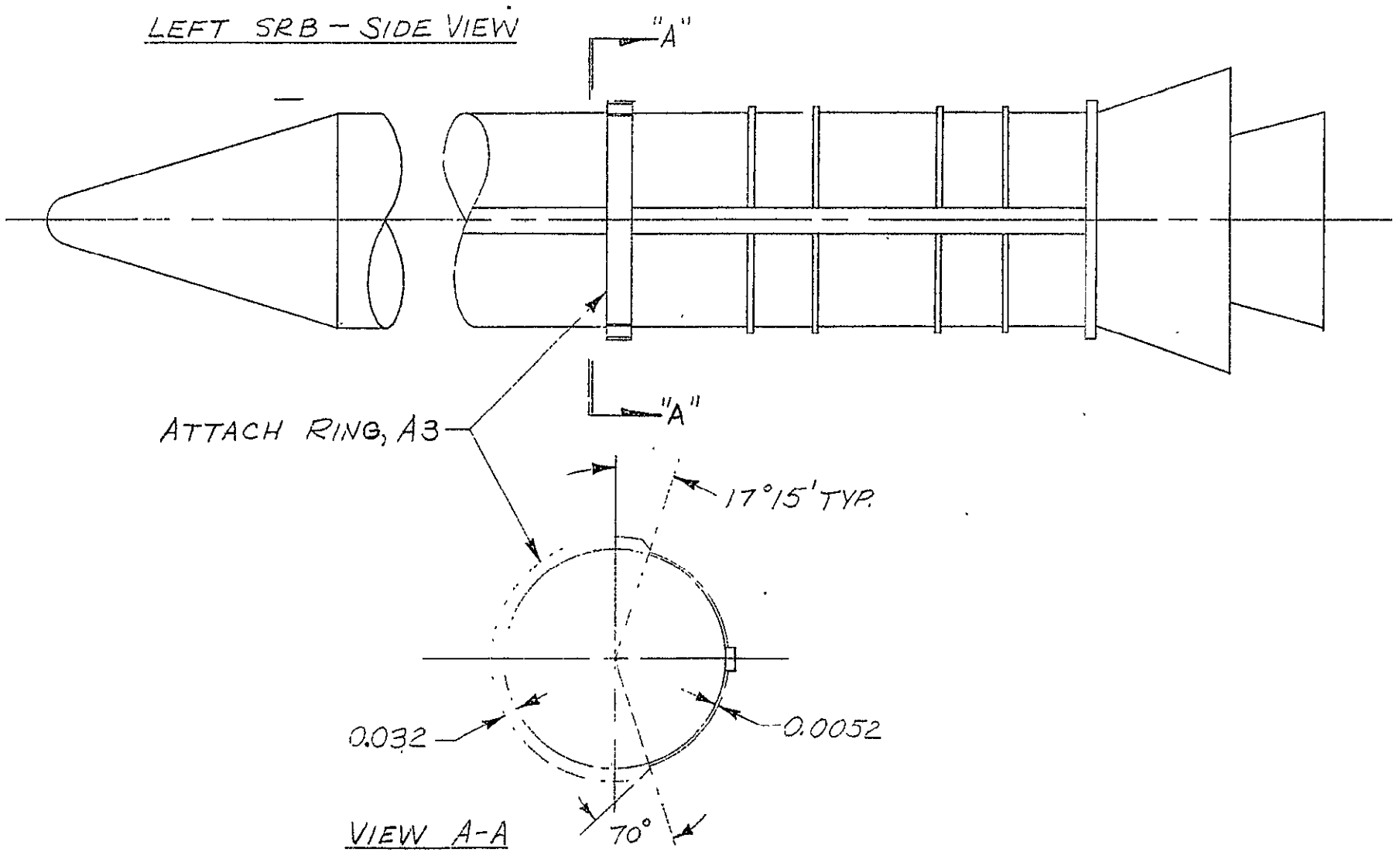


Figure 8. SRB with Modified Attach Ring, A3.

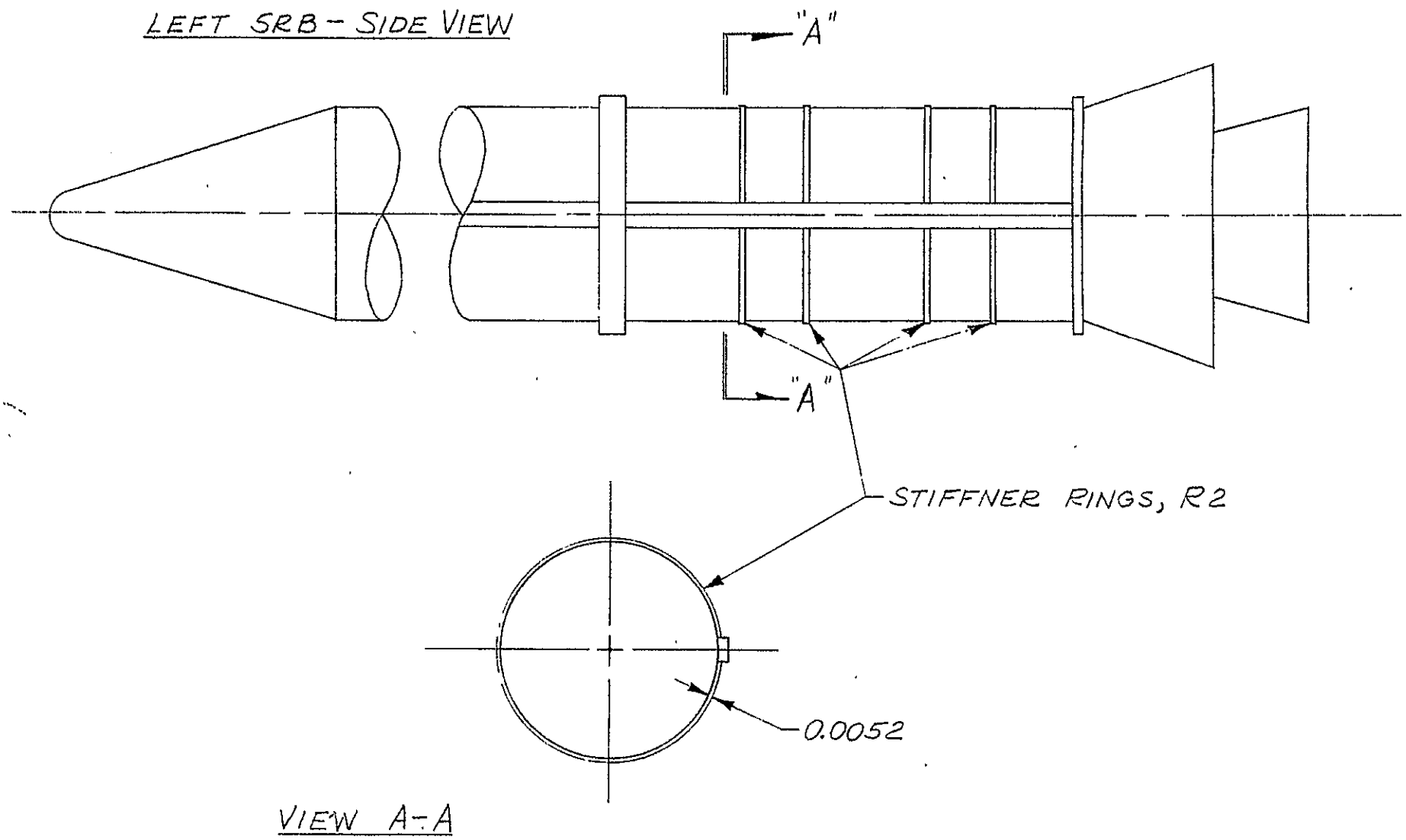
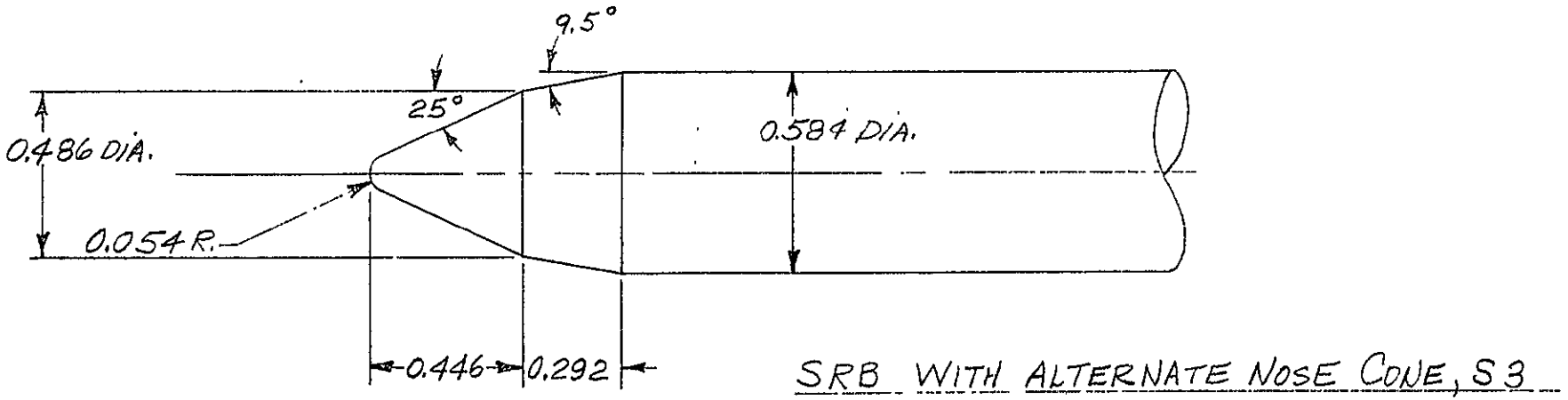


Figure 9. SRB with Modified Stiffner Rings, R2.



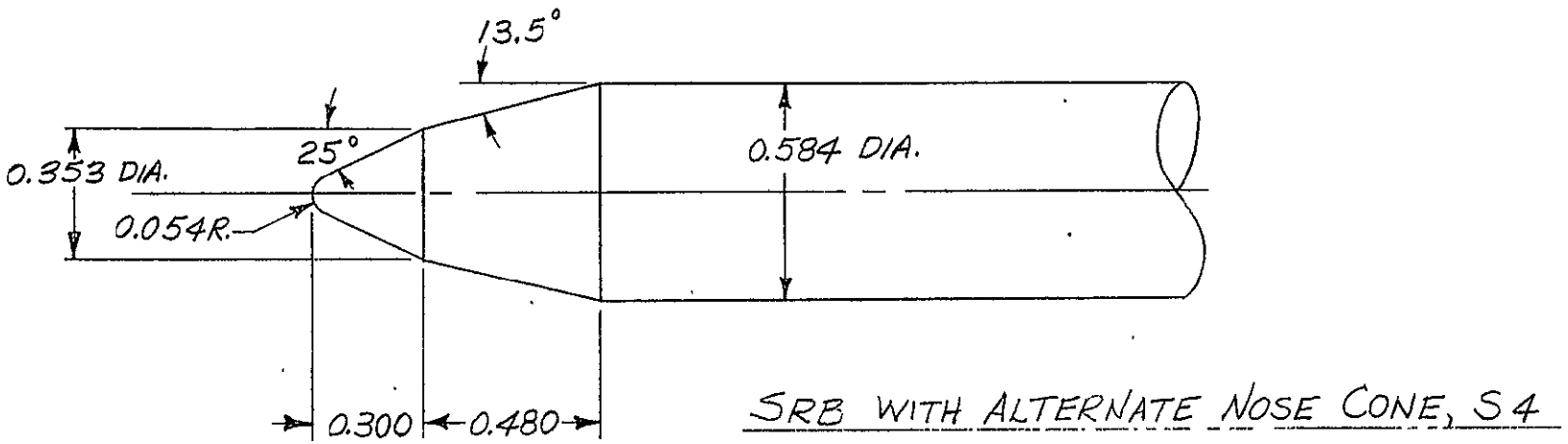


Figure 10: SRB with Alternate Nose Cones, S3 and S4.

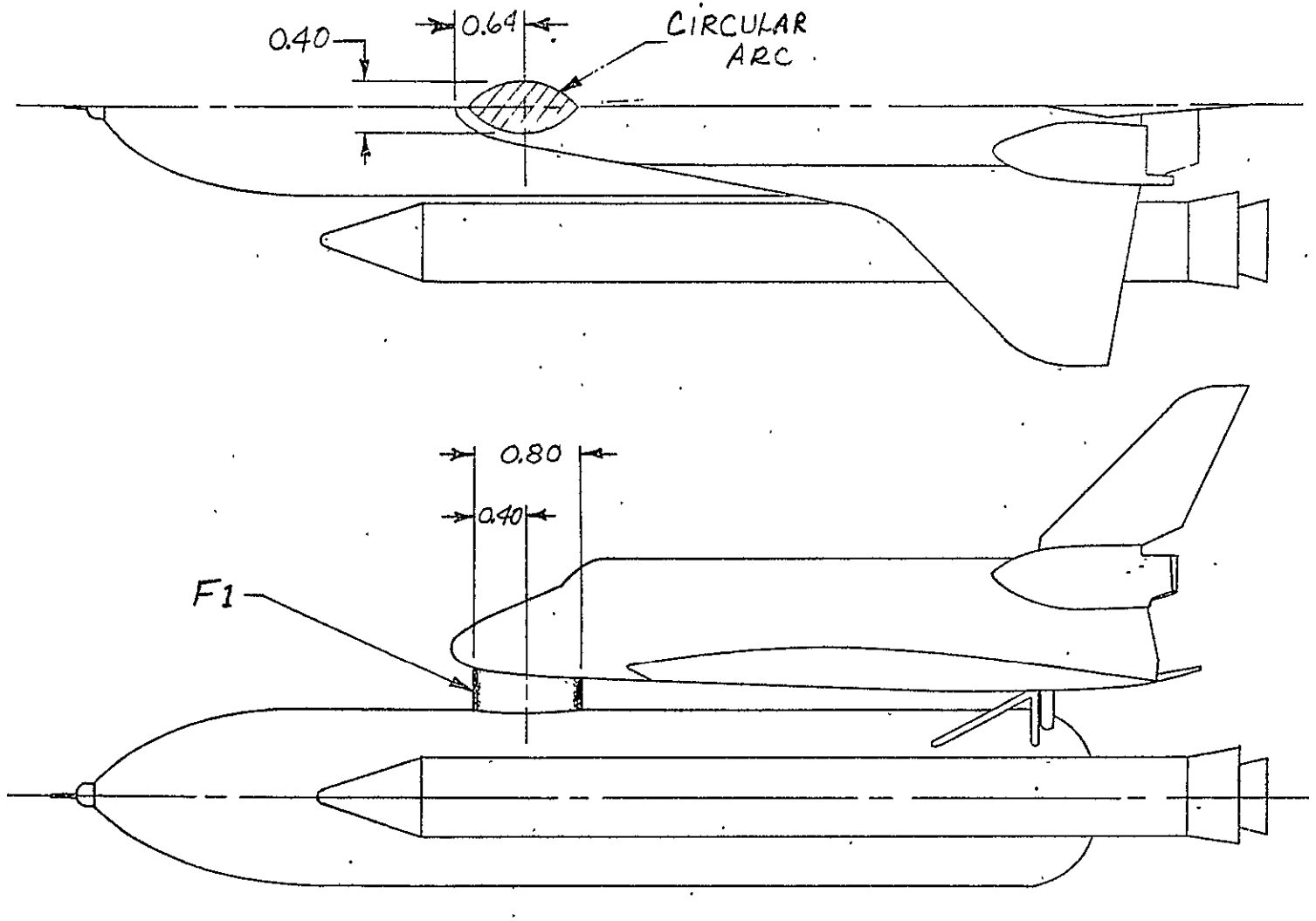


Figure 11. Streamline Forward Orbiter Attach Structure, F1

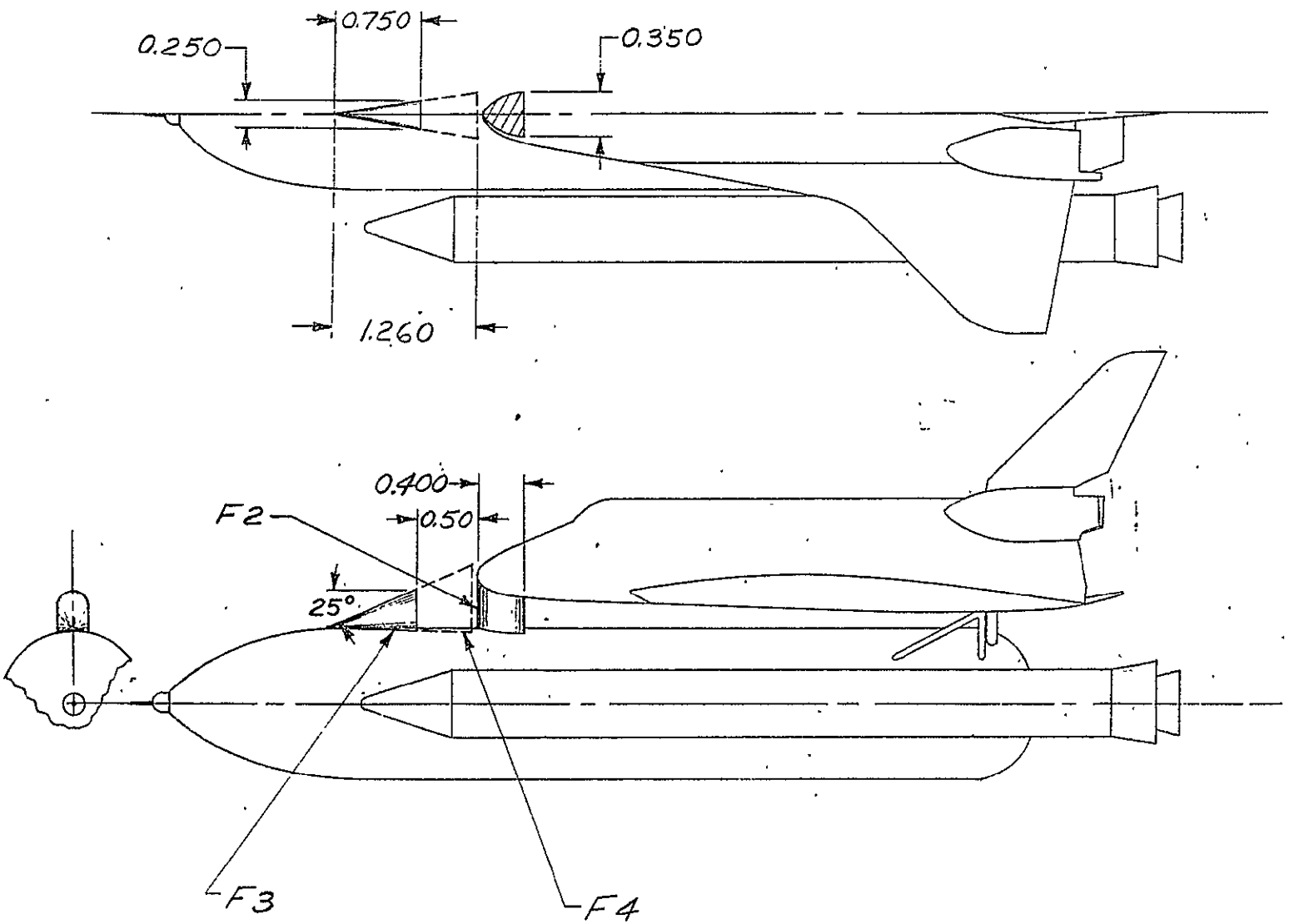


Figure 12. Orbiter Nose Fairing, F2, and Flow Deflectors, F3 and F4.

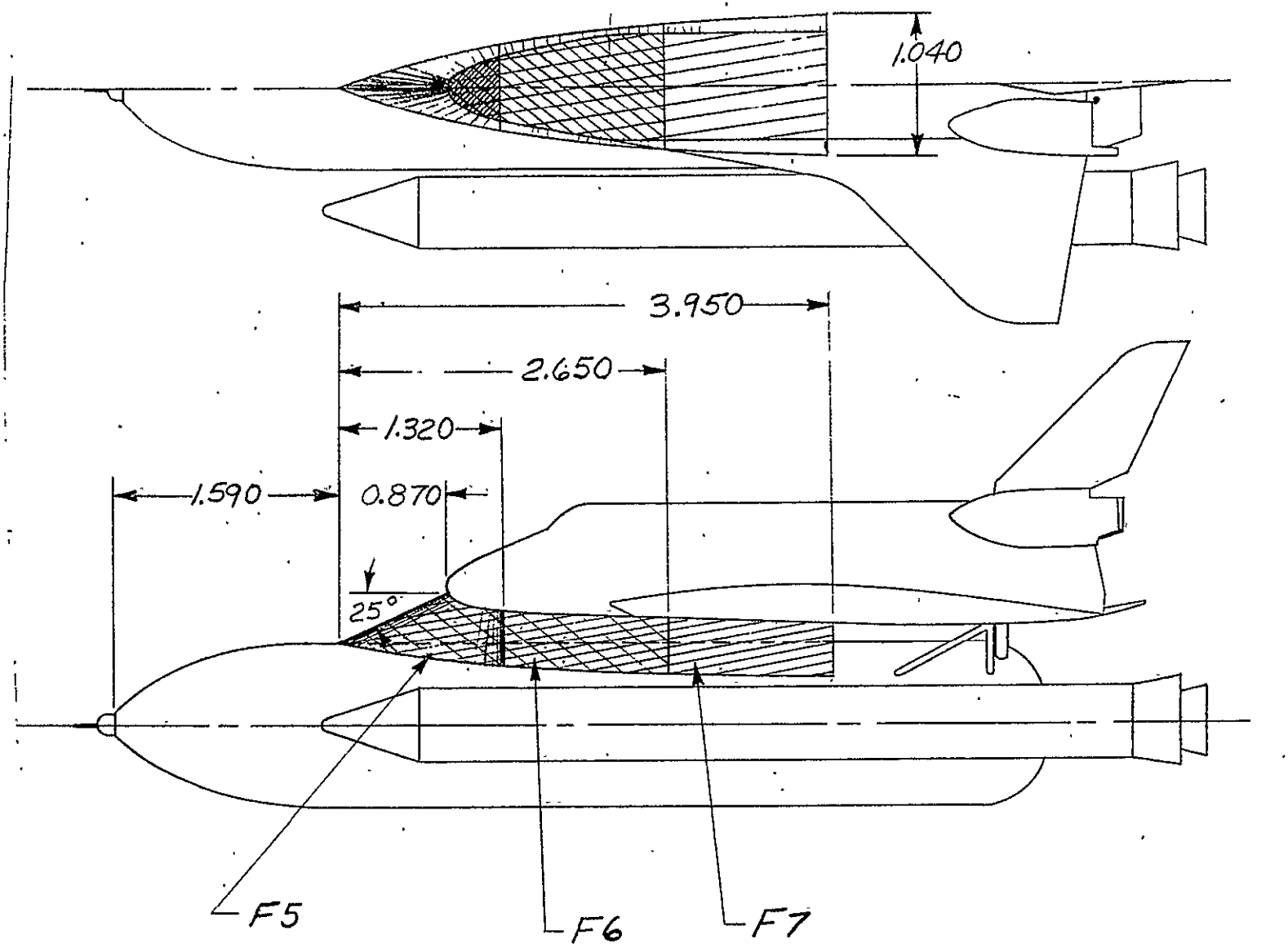


Figure 13. Orbiter/ET Fairings, F5, F6 and F7.

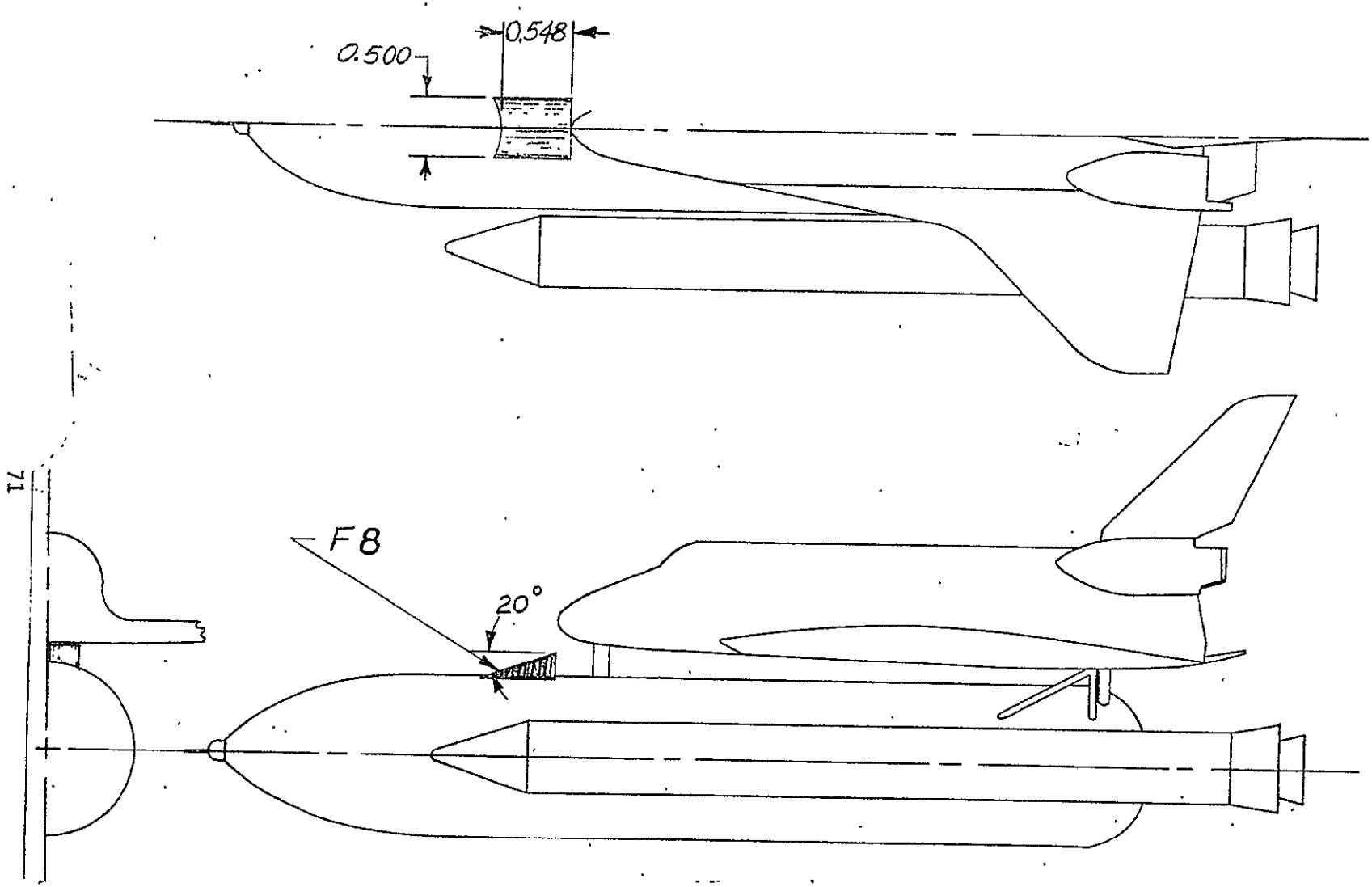


Figure 14. 20° Ramp, F8.

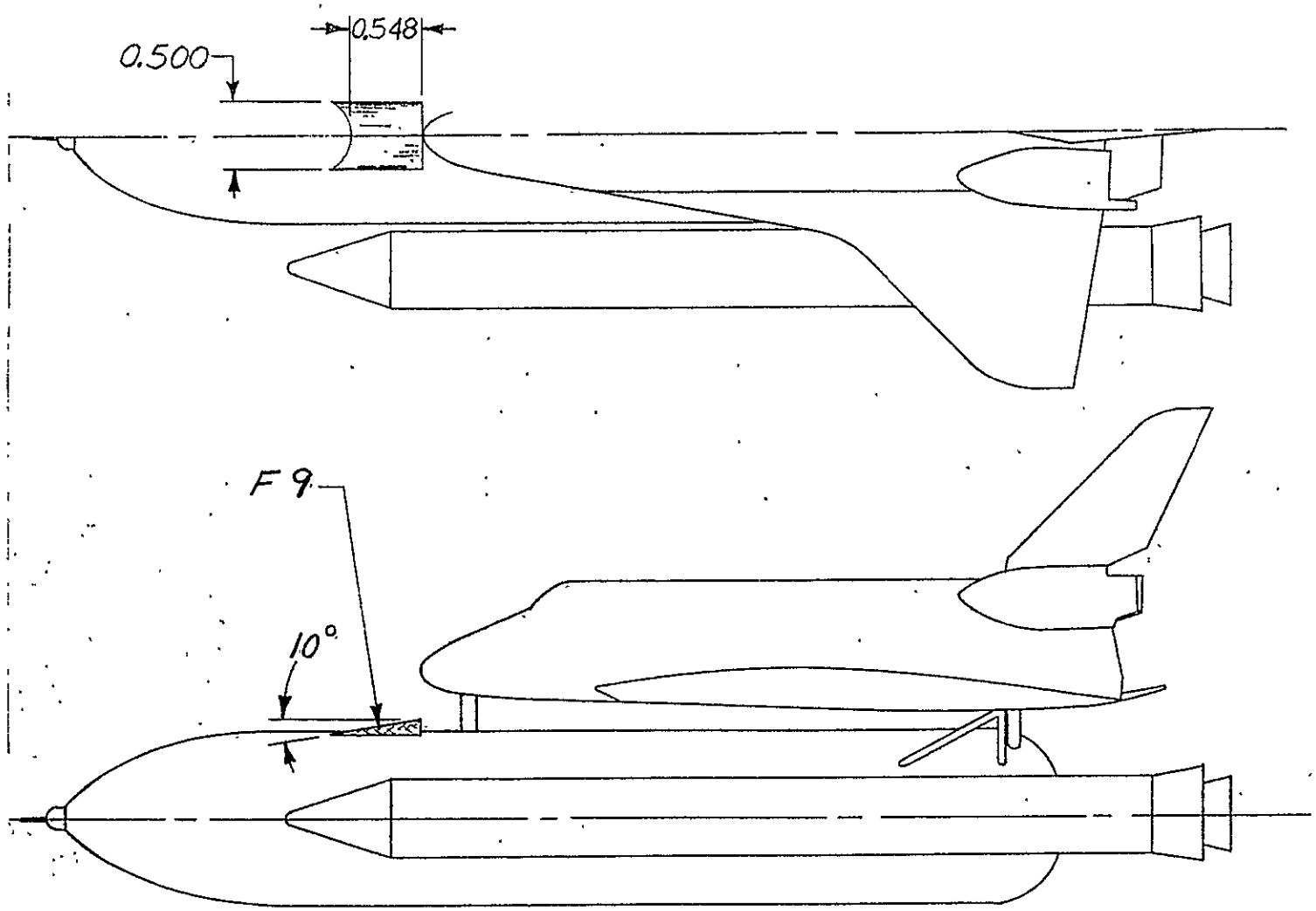


Figure 15. 10° Ramp, F9.

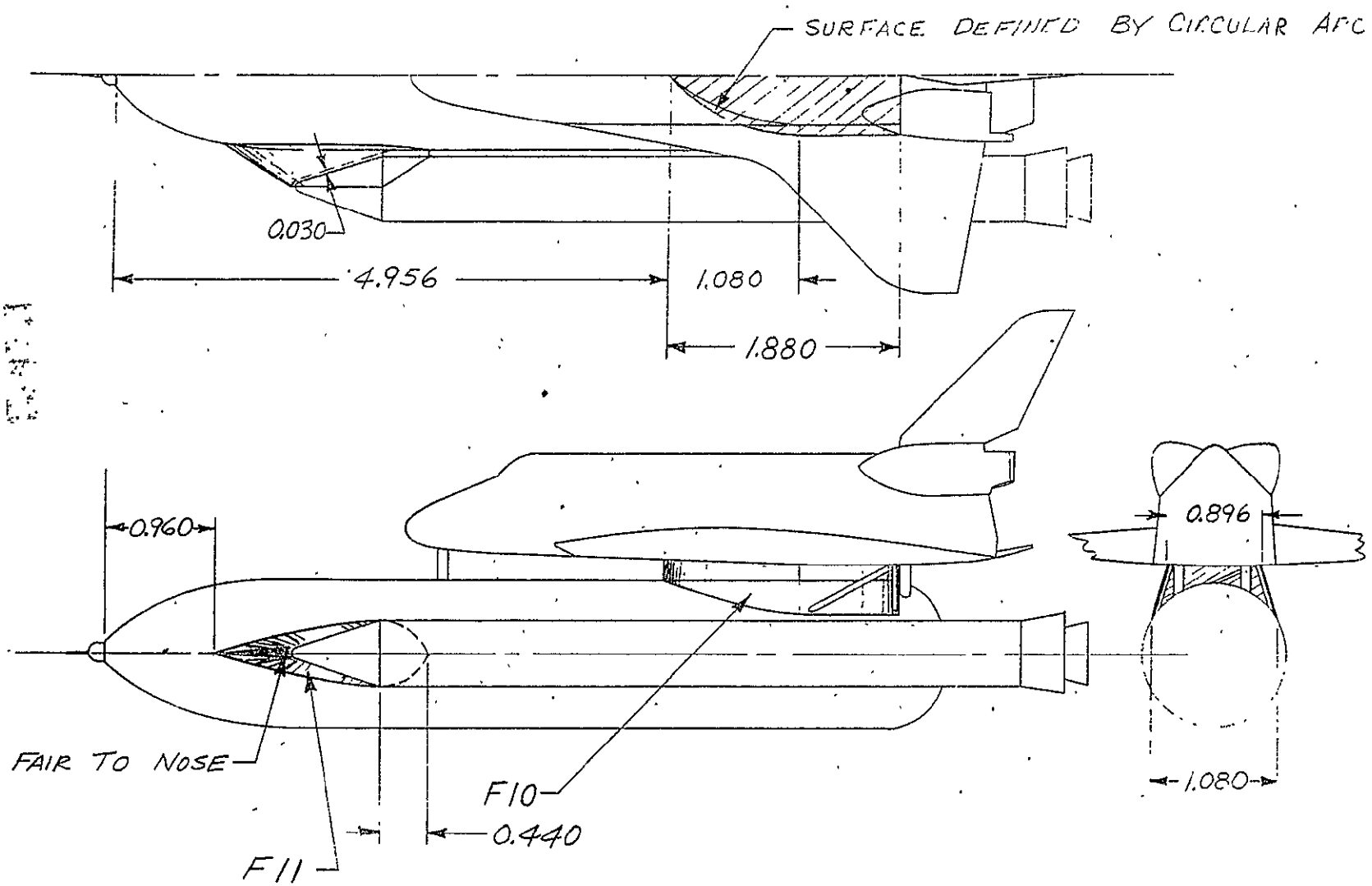


Figure 16. Aft Orbiter Attach Structure Fairing, F10, and SRB Nose Fairing, F11.

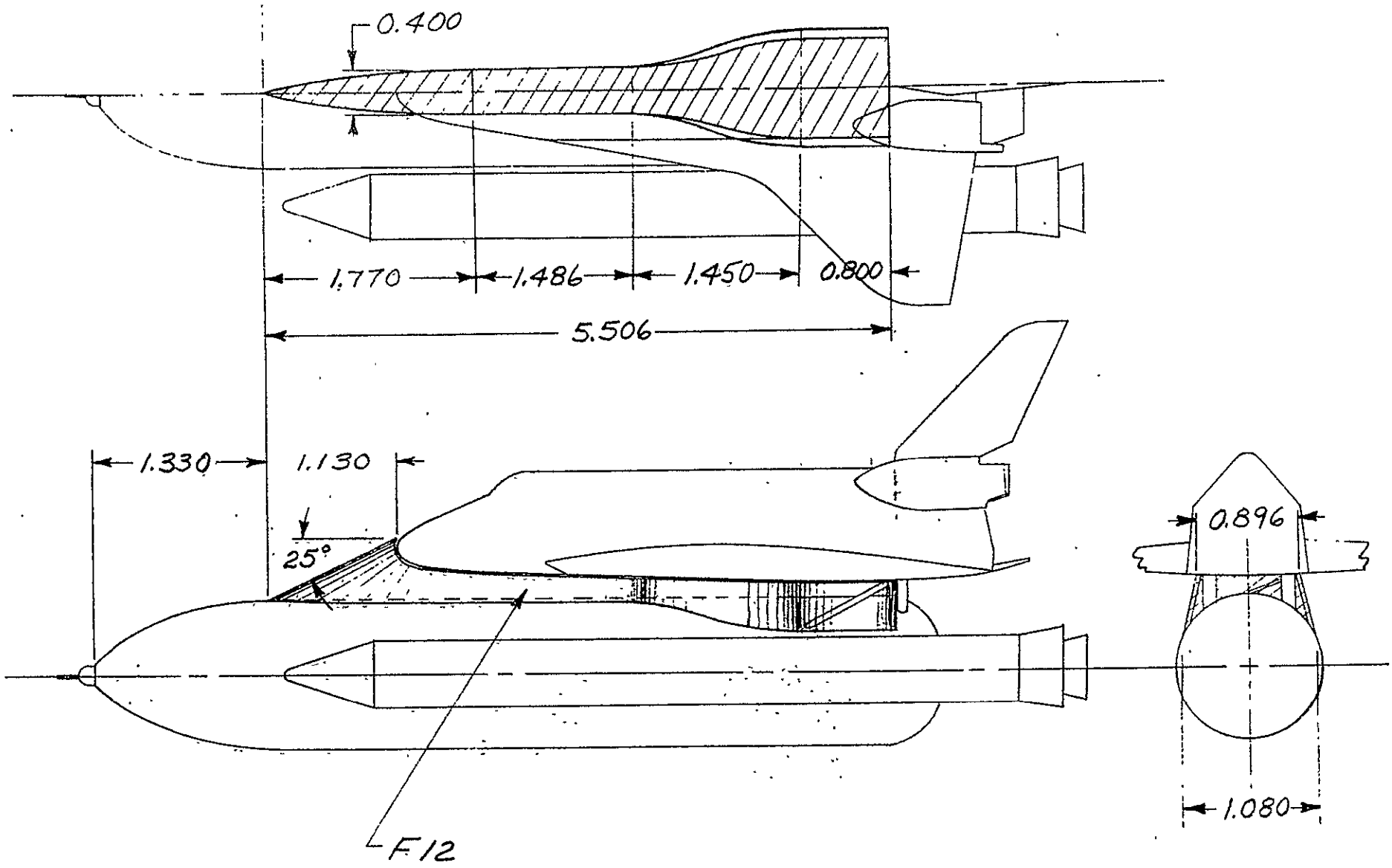


Figure 17. Orbiter/ET Full Fairing, F12.

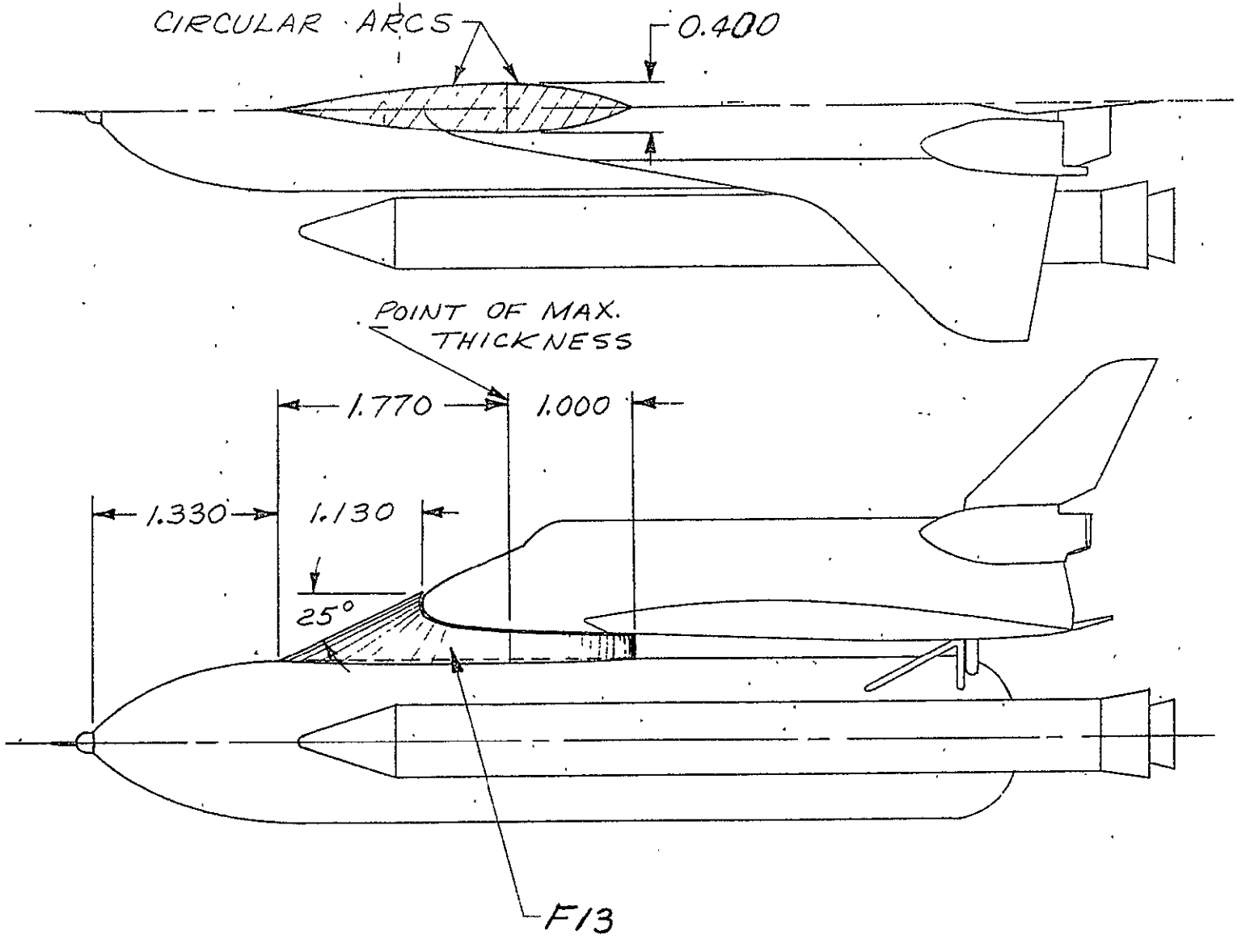


Figure 18. Forward Orbiter/ET Attach Structure Fairing, F13.

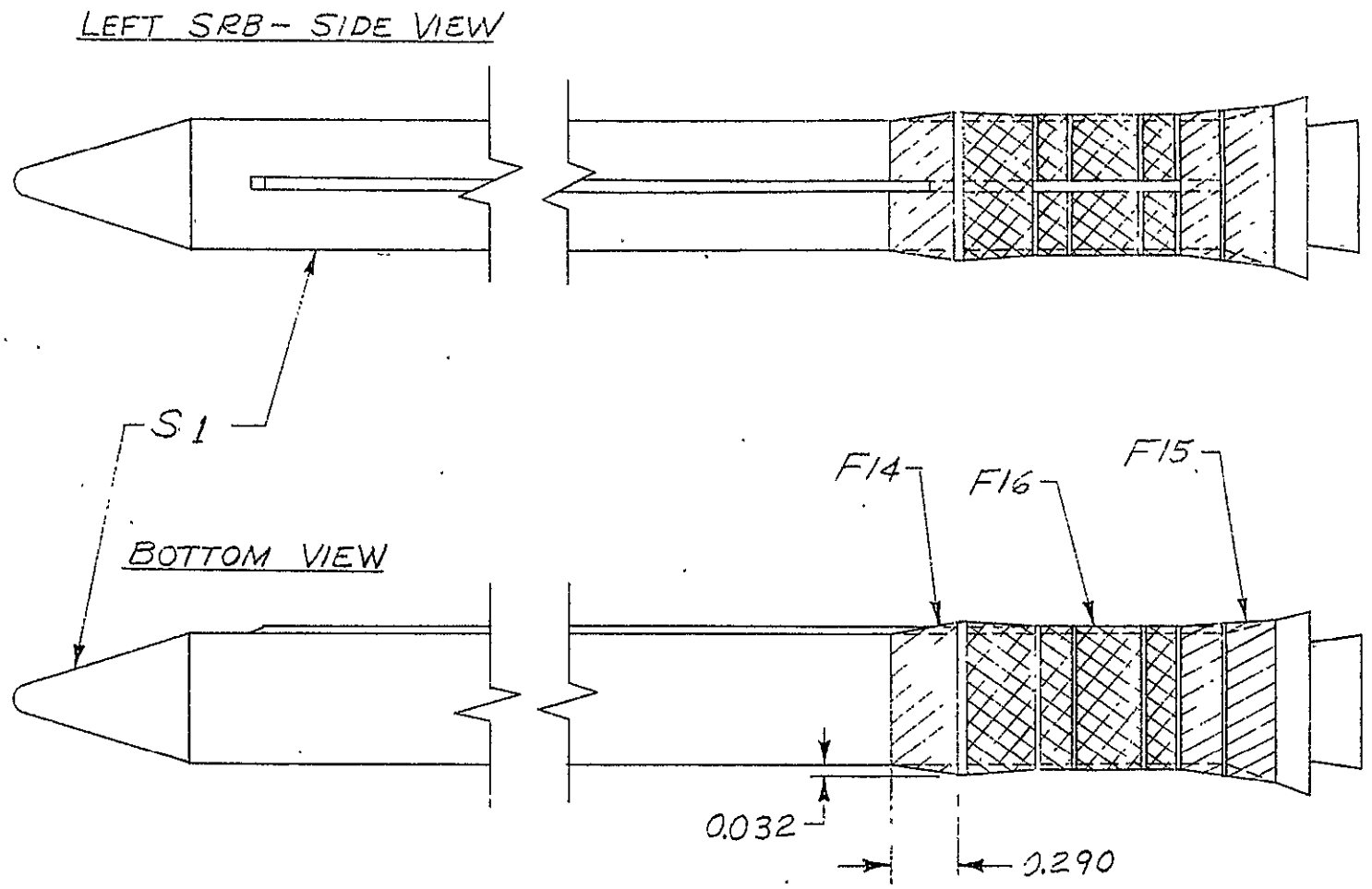


Figure 19. SRB with Structural Ring Fairings, F14, F15, and F16.

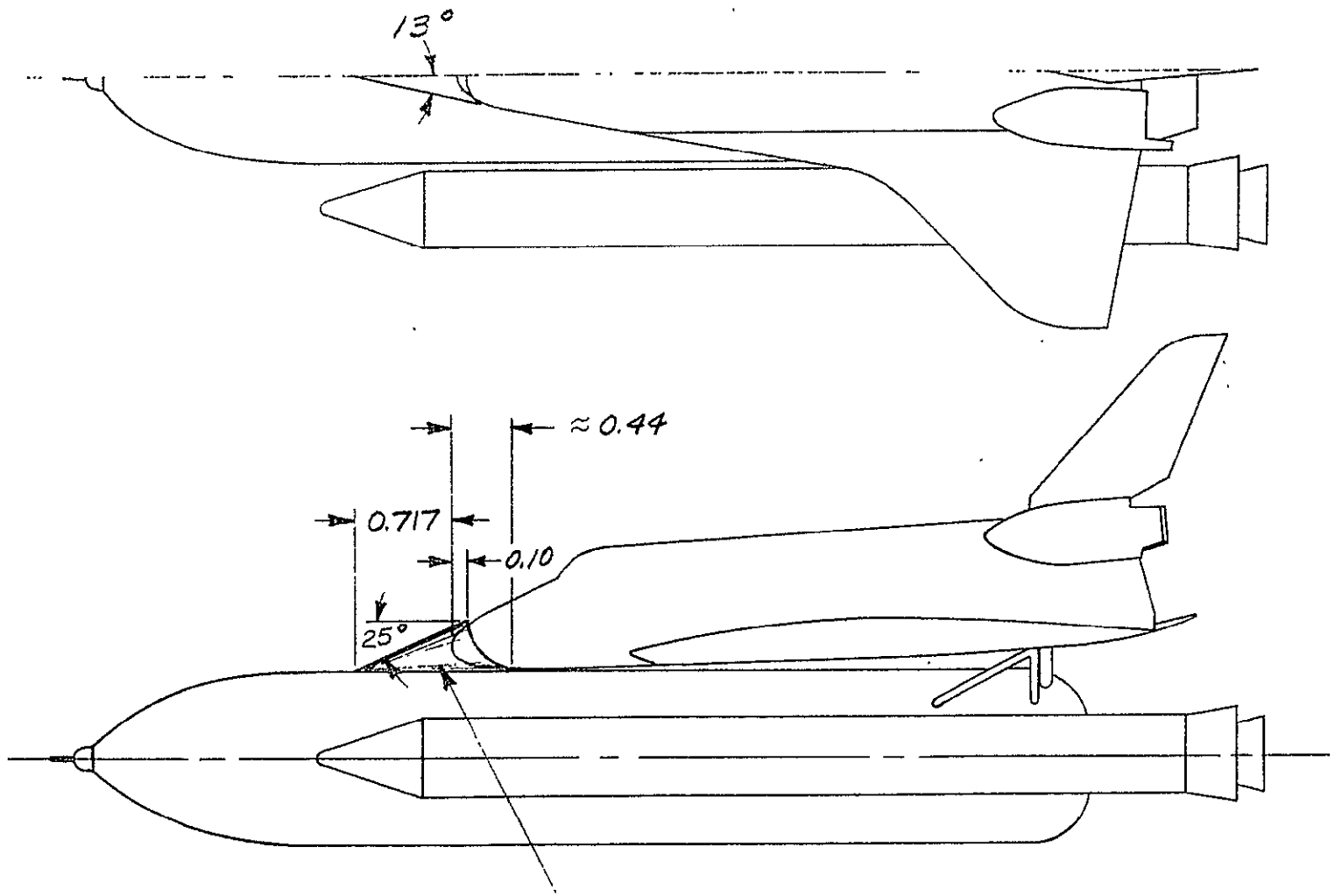


Figure 20. Orbiter Nose Fairing, F17.

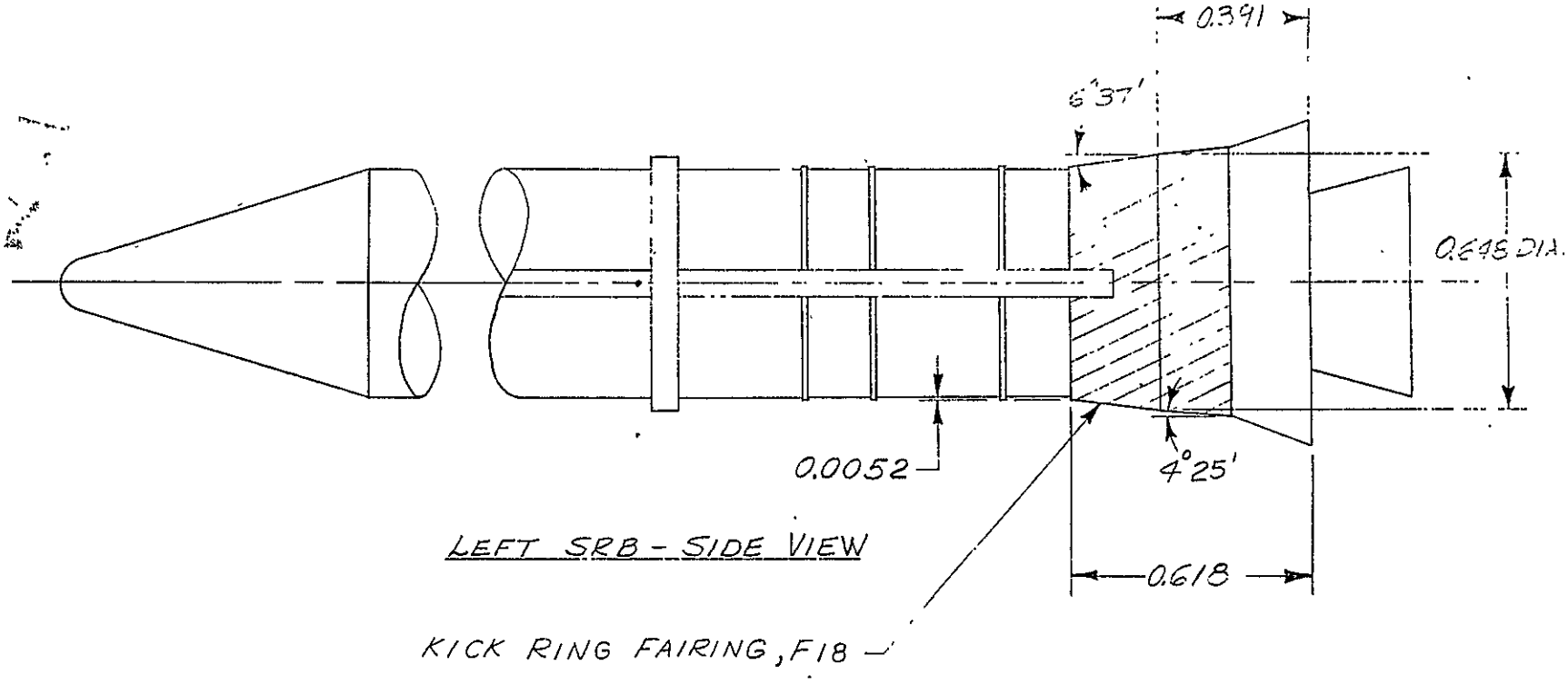


Figure 21. SRB with Kick Ring Fairing, F18.

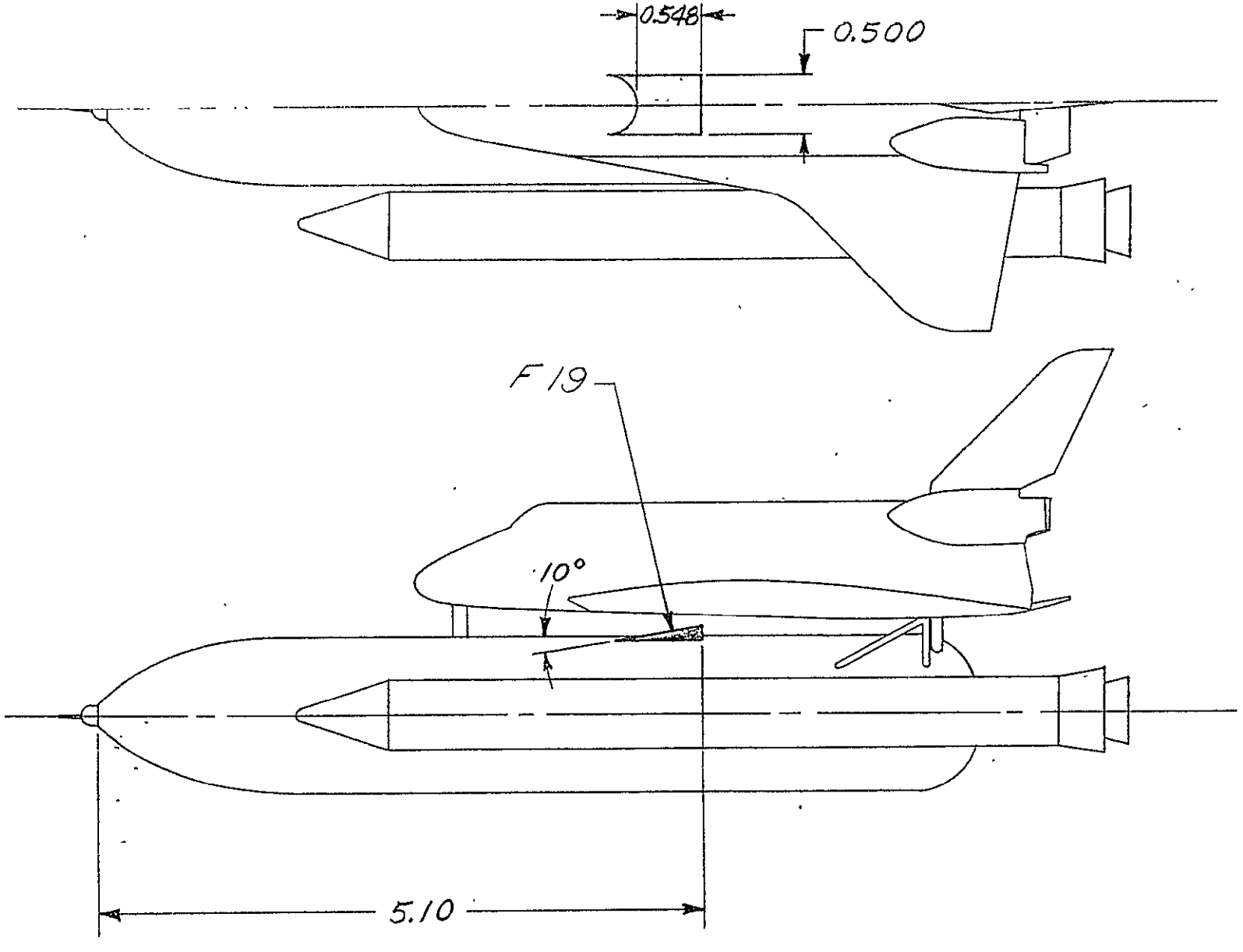


Figure 22. 10° Ramp, Aft Position, F19.

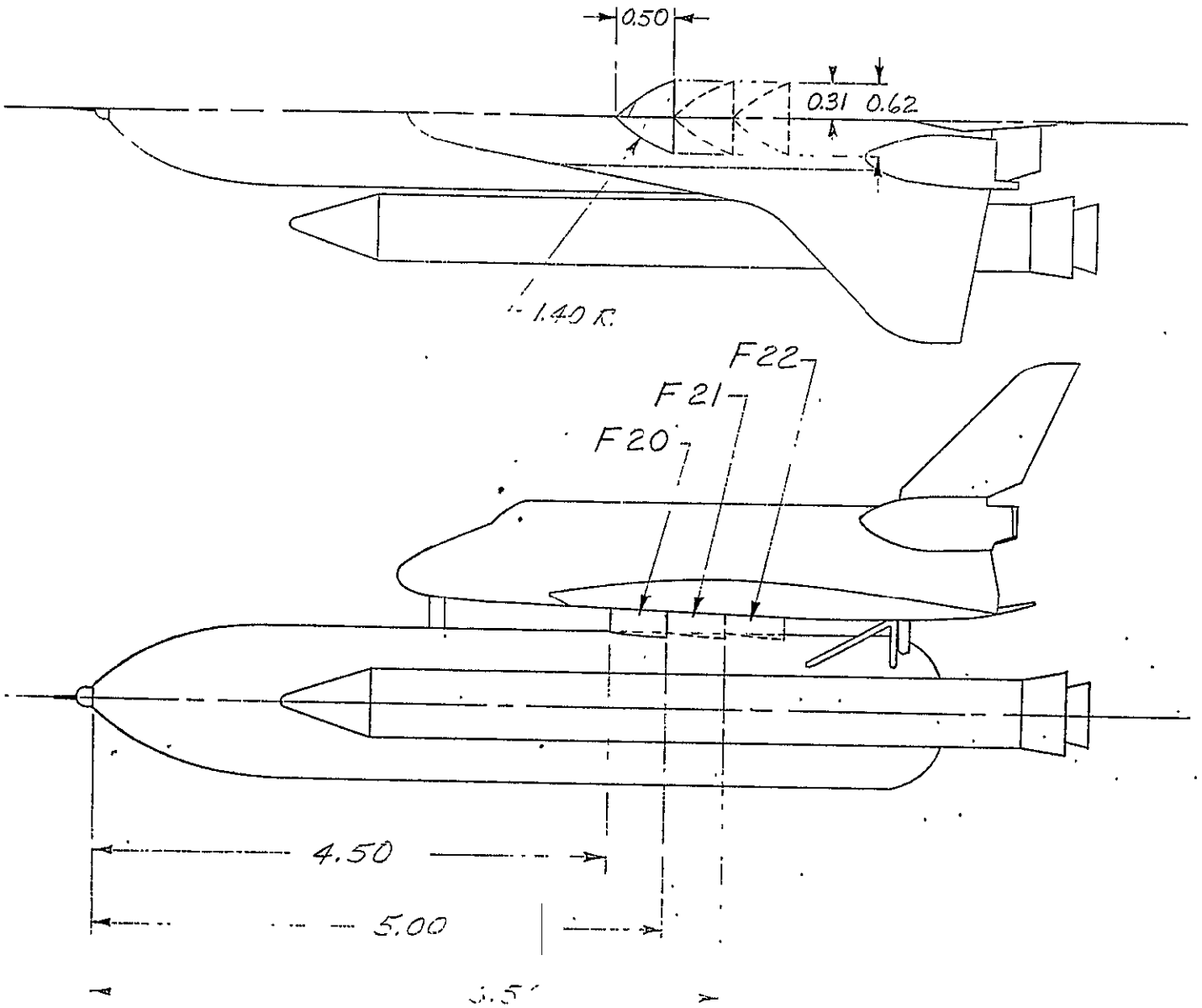


Figure 23. Orbiter/ET Mid Fairings; F20, F21, F22.

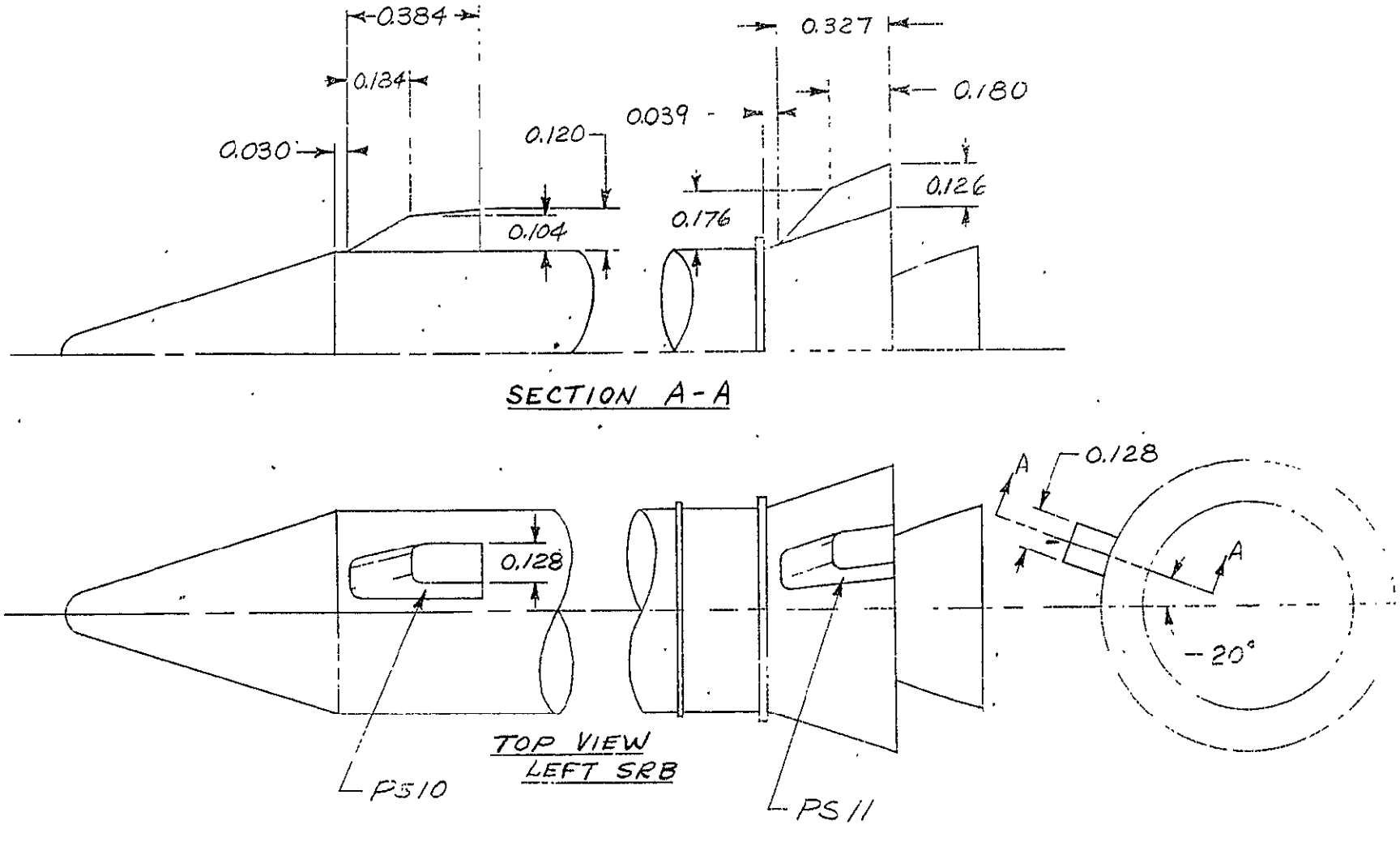


Figure 24. SRB Separation Motor Definition, Fore (PS10) and Aft (PS11) Fairings.

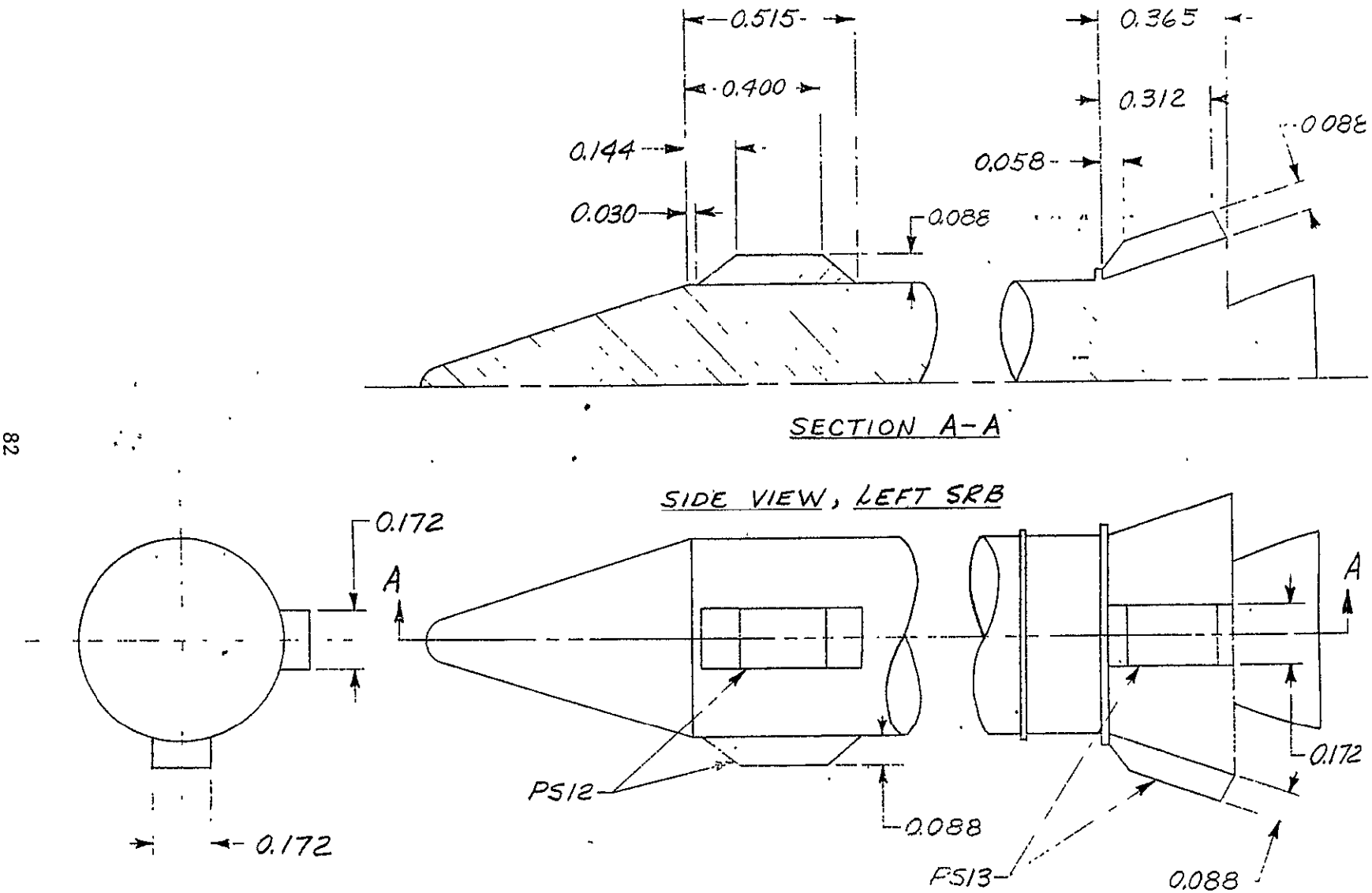


Figure 25. SRB Orthogonal Separation Motor Definition, Fore (PS12) and Aft (PS13) Fairings.

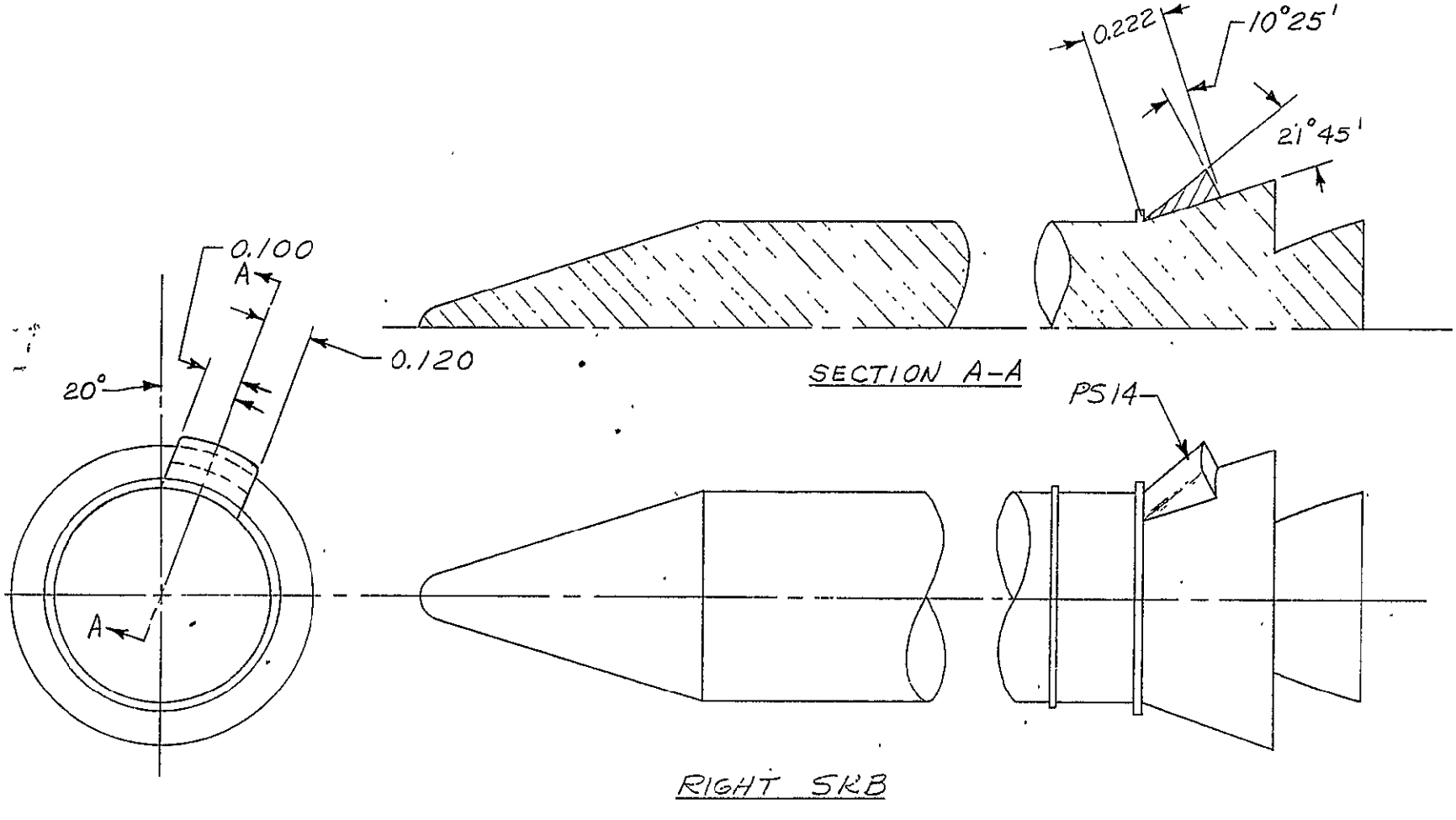


Figure 26. SRB Separation Motor, Aft Fairing (PS14).

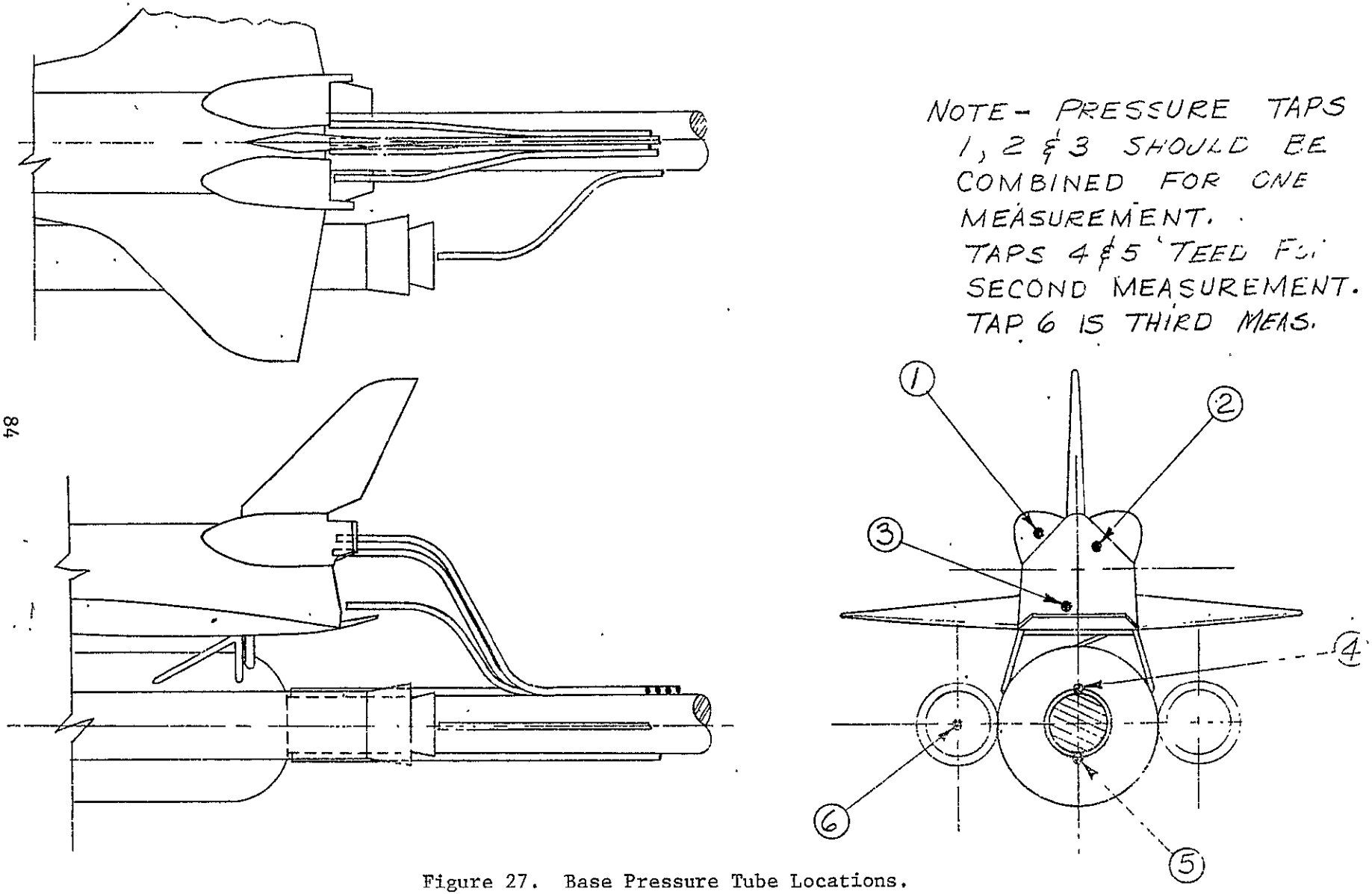


Figure 27. Base Pressure Tube Locations.

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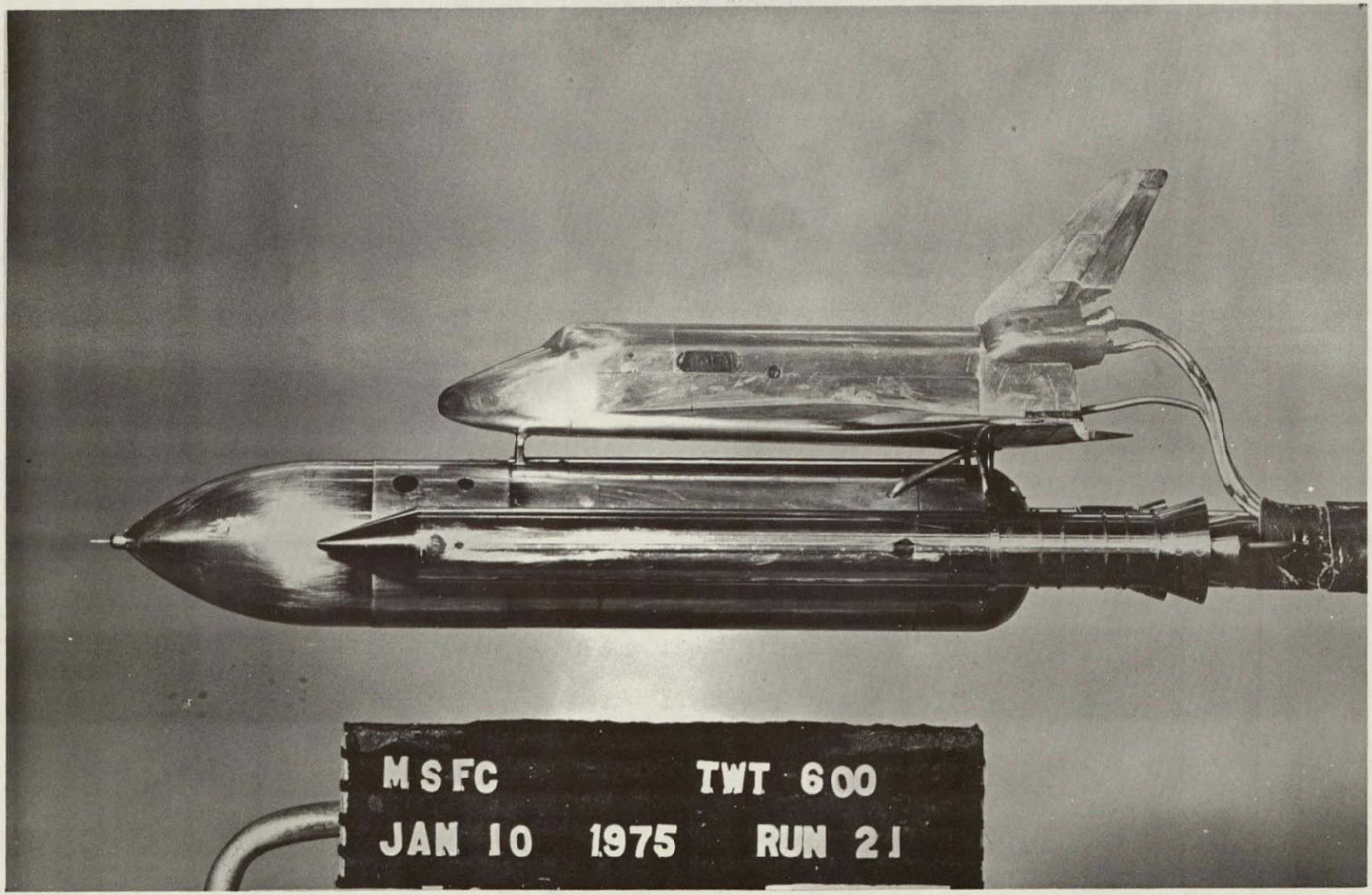


Figure 28. Baseline Ascent Vehicle Model, O_1 T_1 S_1 A_1 R_1 K_1.

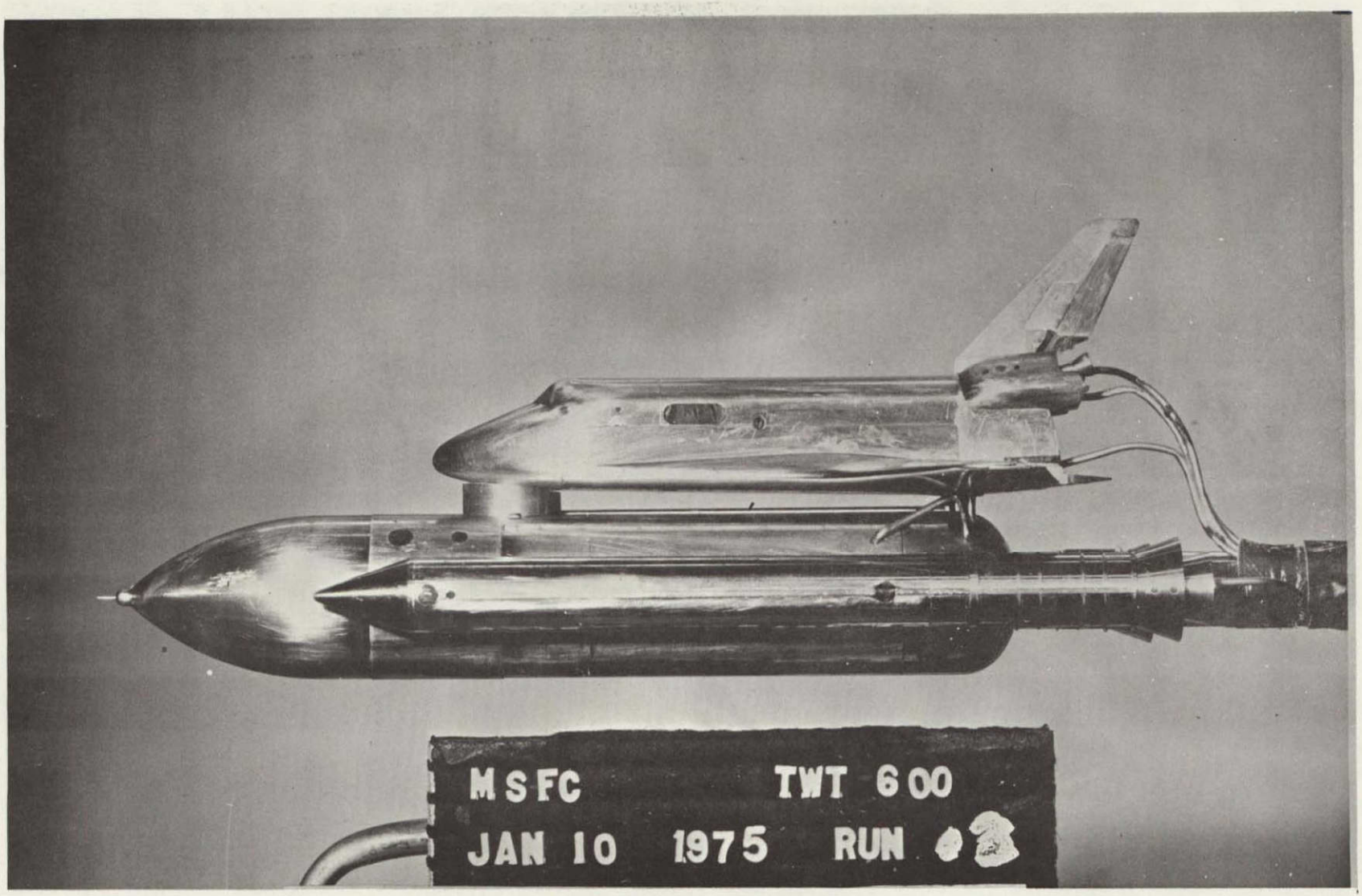


Figure 29. Ascent Vehicle with Streamlined Forward Orbiter Attach Structure, O_1 T_1 S_1 A_1 R_1 K_1 F_1.

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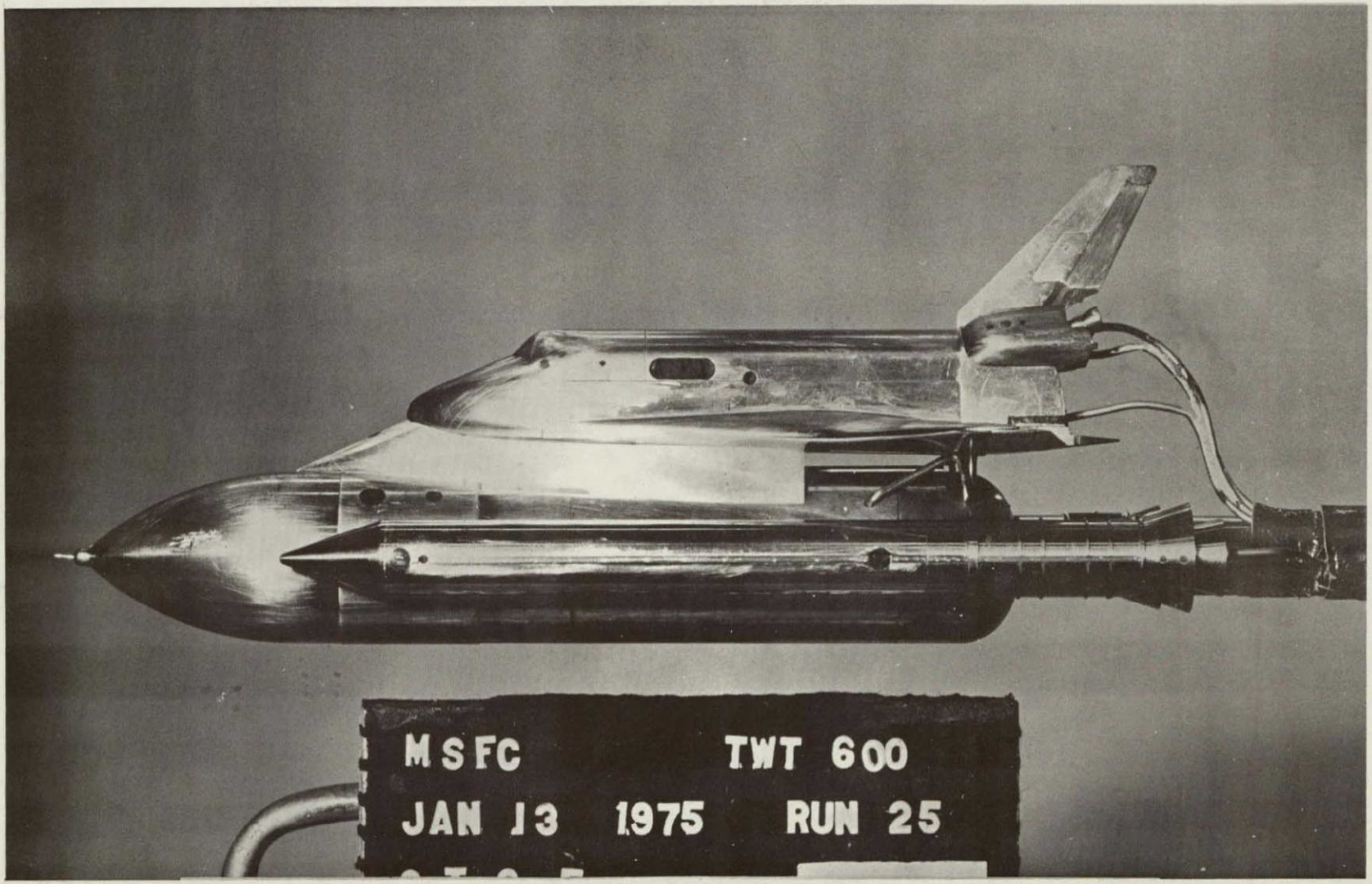


Figure 30. Ascent Vehicle with Orbiter/ET Fairing, O_1 T_1 S_1 A_1 R_1 K_1 F_7.

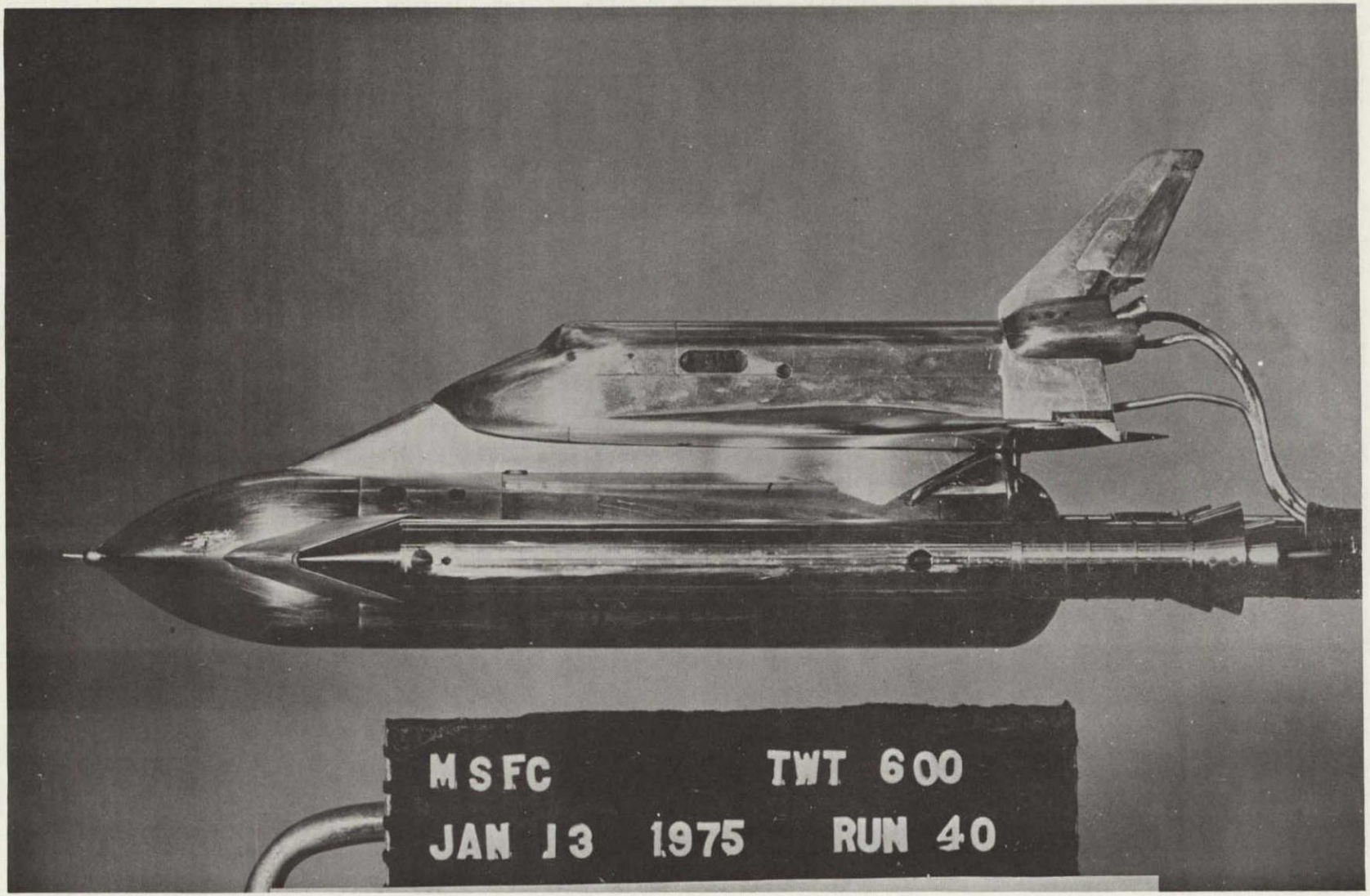


Figure 31. Ascent Vehicle with Orbiter/ET Full Fairing and SRB Nose Fairings, O_1 T_1 S_1 A_1 R_1 K_1 F_{11} F_{12}.



Figure 32. Ascent Vehicle with Forward and Aft Orbiter/ET Attach Structure Fairings, O_1 T_1 S_1 A_1 R_1 K_1 F_{10} F_{13}.

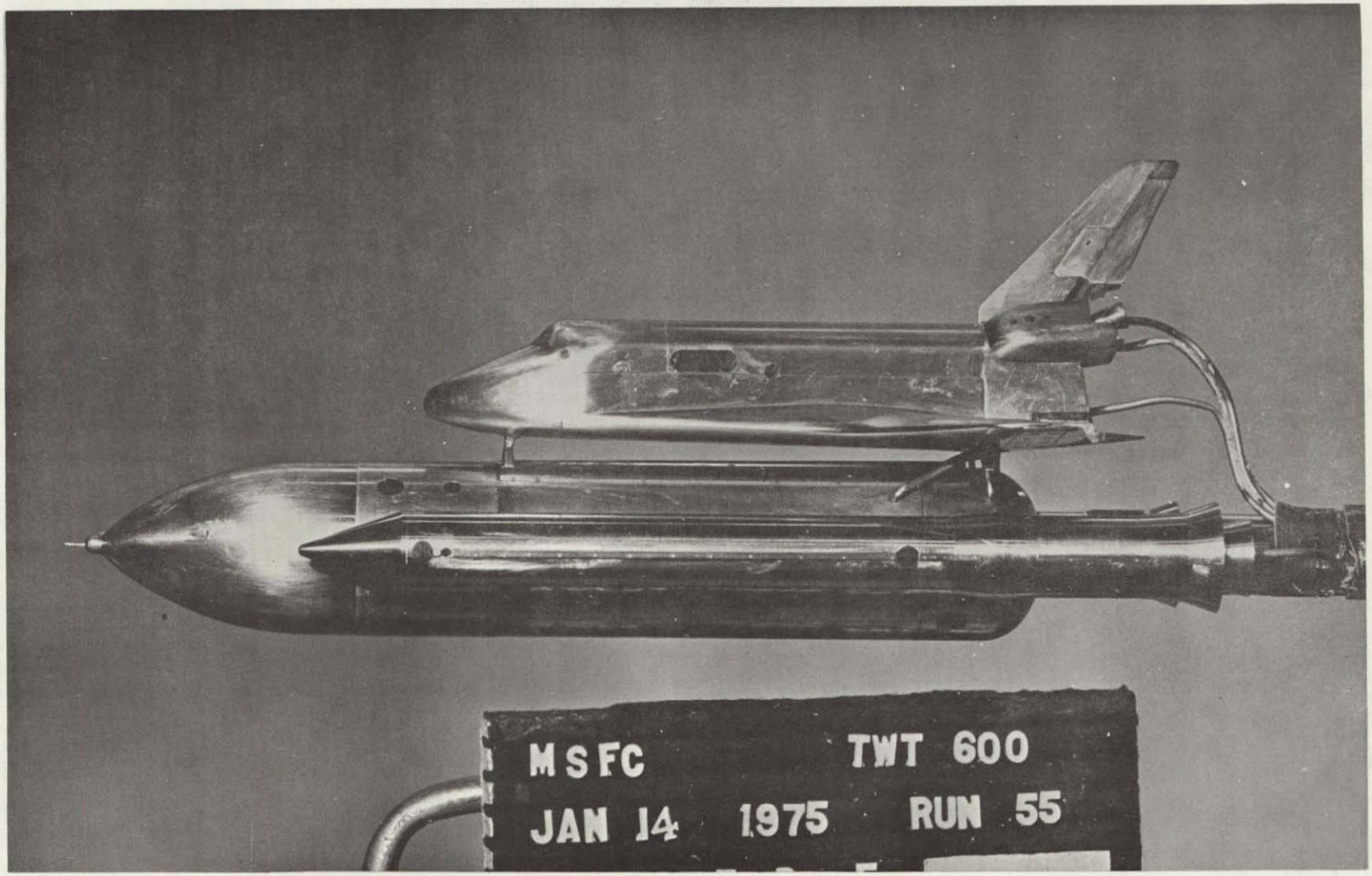


Figure 33. Ascent Vehicle with SRB Structural Ring Fairings, O_1 T_1 S_1 A_1 R_1 K_1 F_1 F_{14} F_{15} F_{16}.

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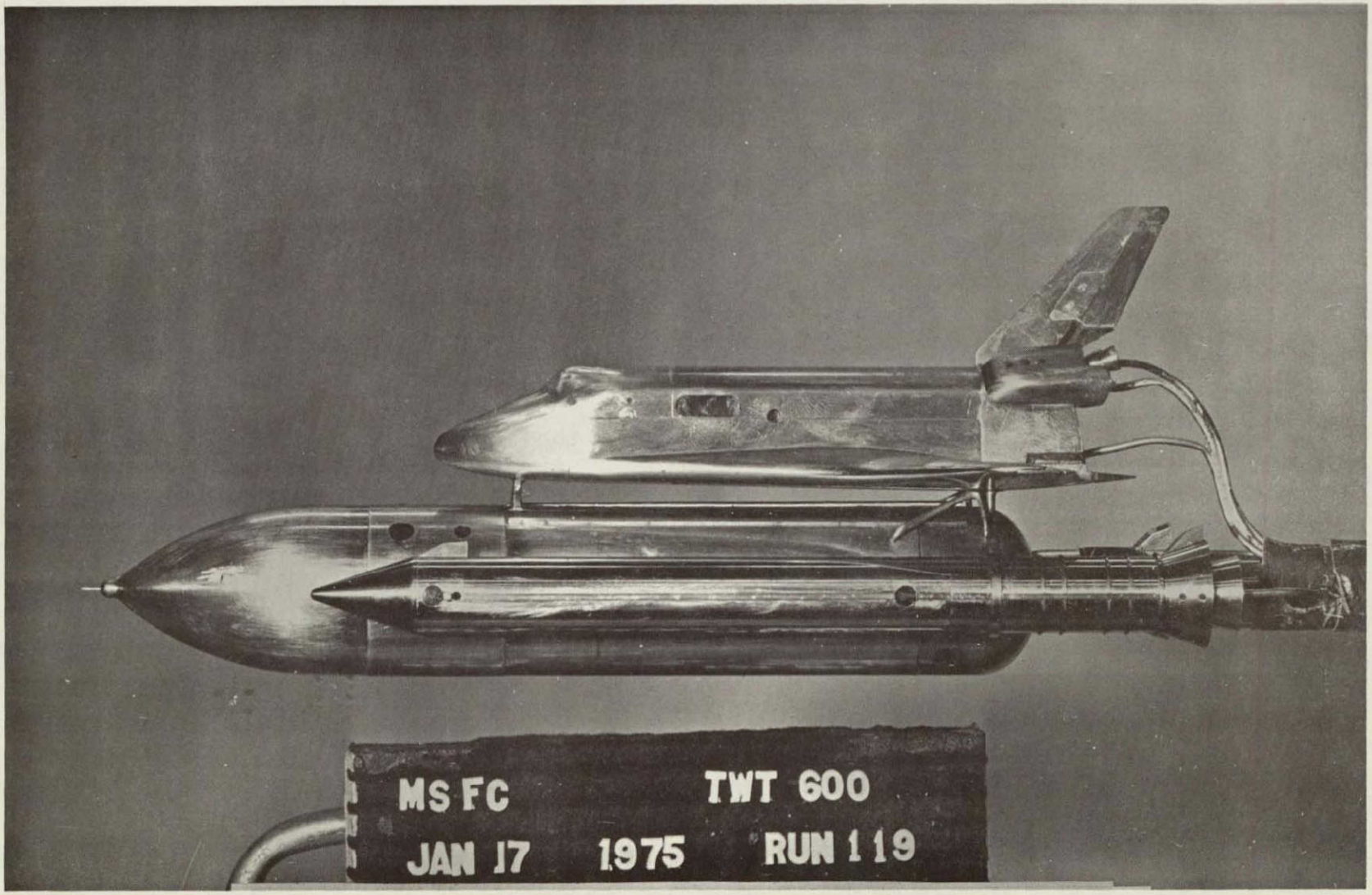


Figure 34. Ascent Vehicle with SRB Separation Motor Fairings, O_1 T_1 S_1 A_1 R_1 K_1 PS_{10} PS_{11}.

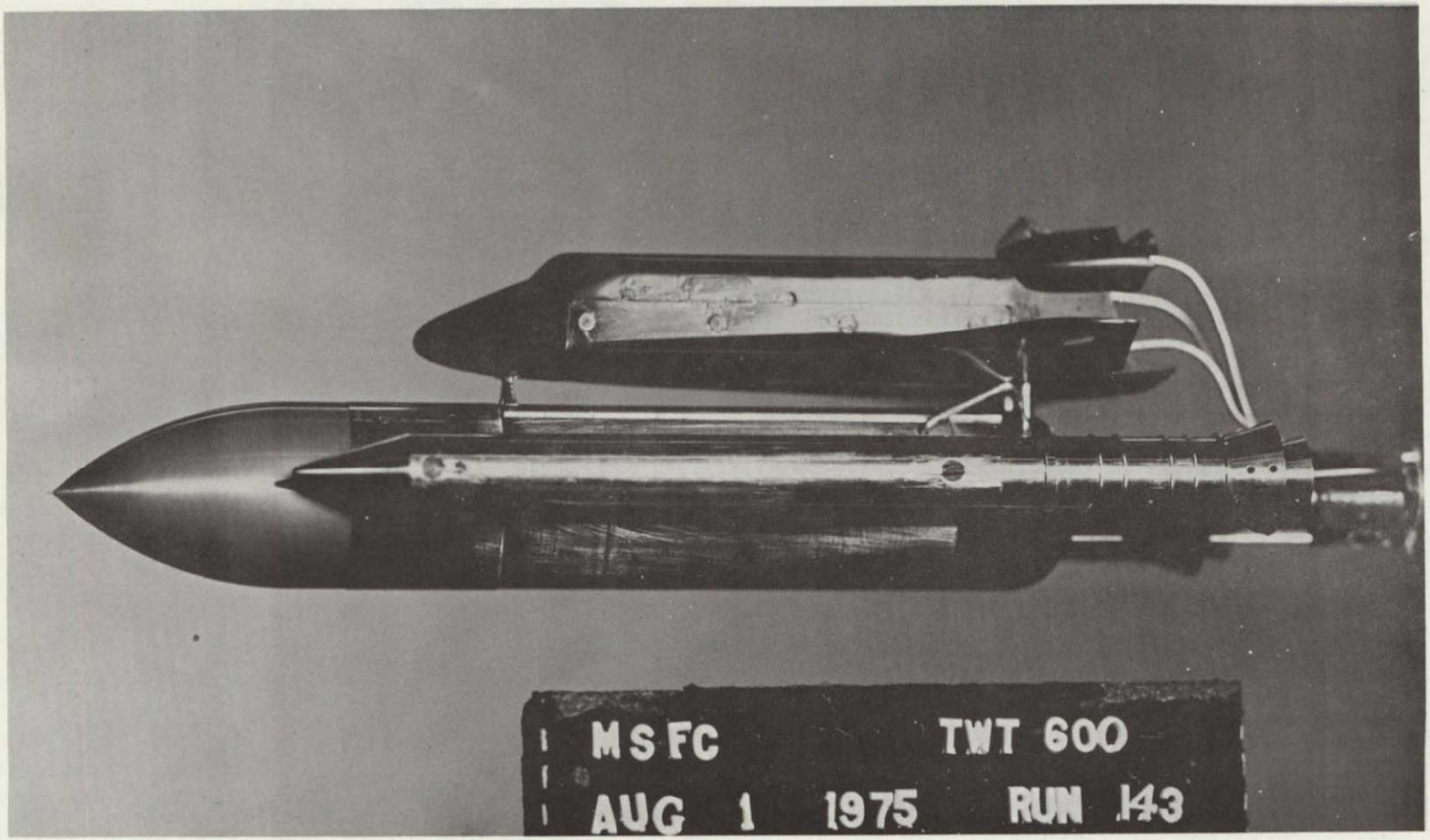


Figure 35. Ascent Vehicle Without Orbiter Vertical Tail and Modified ET Nose, O_2 T_3 S_1 A_1 R_1 K_1.

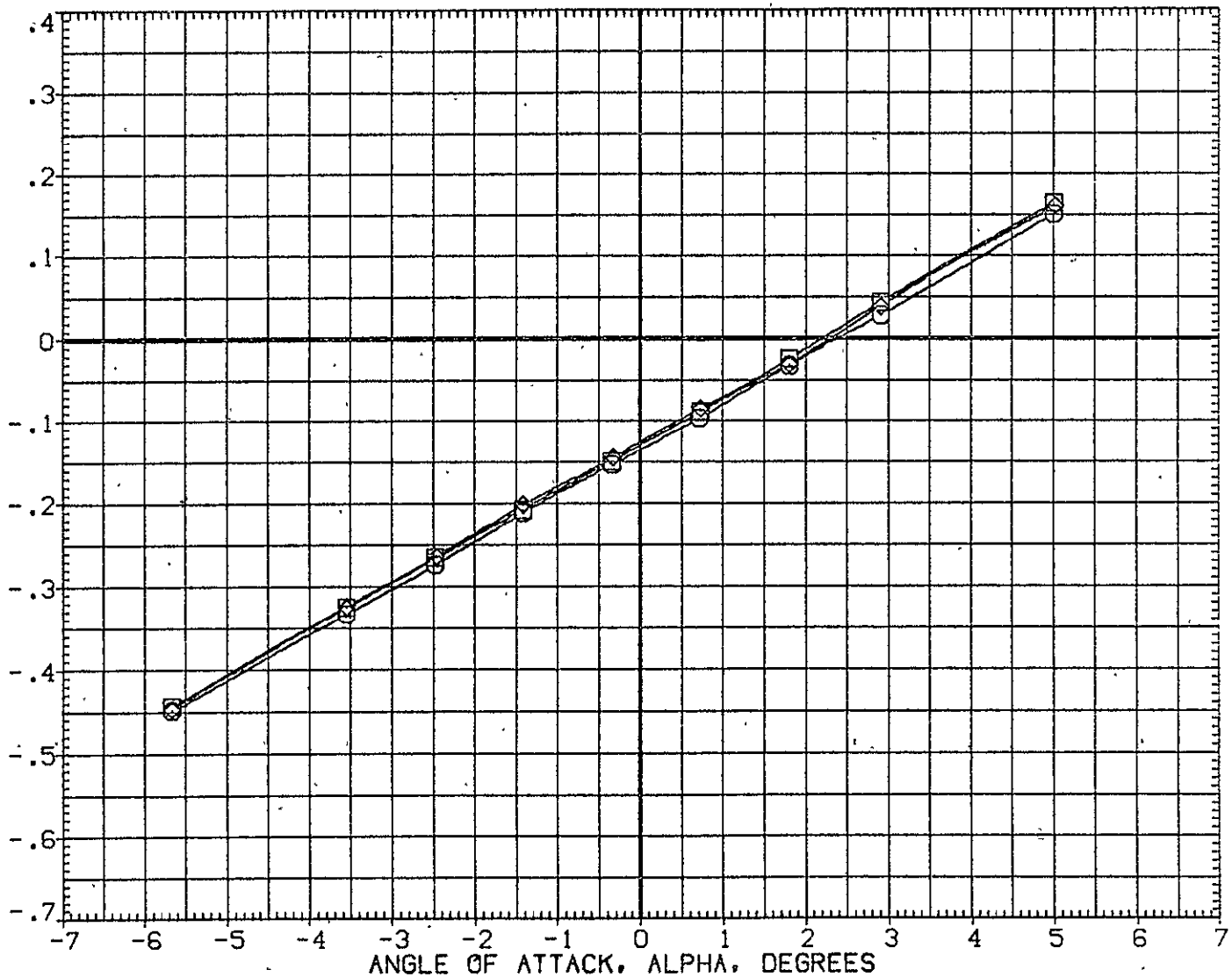
DATA FIGURES

C.2

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(A1L001)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
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LREF	1290.0000	IN.
BREF	1290.0000	IN.
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YMRP	.0000	IN. YT
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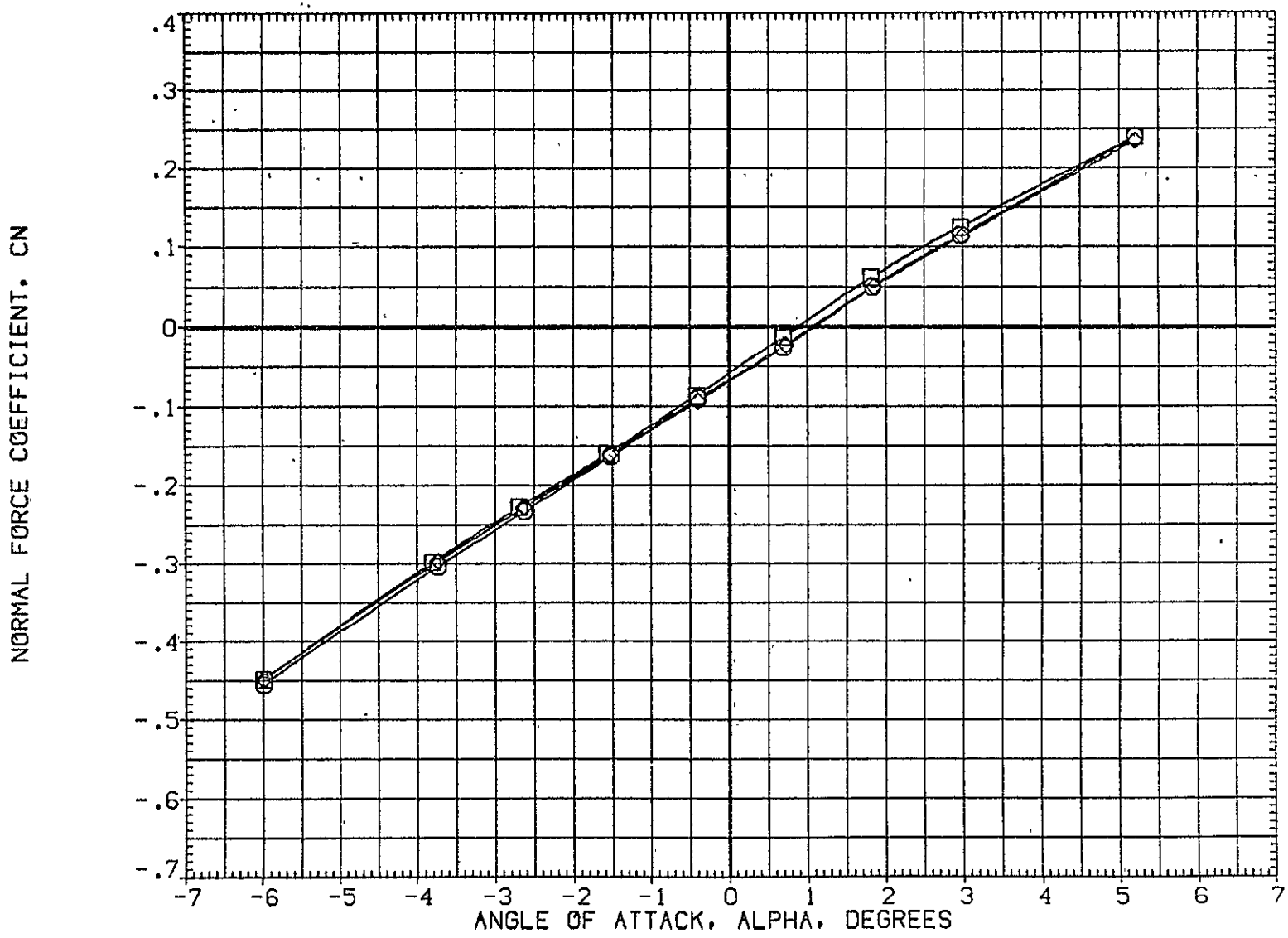


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

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(AILO01)	□	MSFC TWT 600 (FA14)	01TIS1A1R1K1F1	.000	.000	90.000	.140
(AILO02)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1F2	.000	.000	90.000	.140
(AILO03)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
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SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
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(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION

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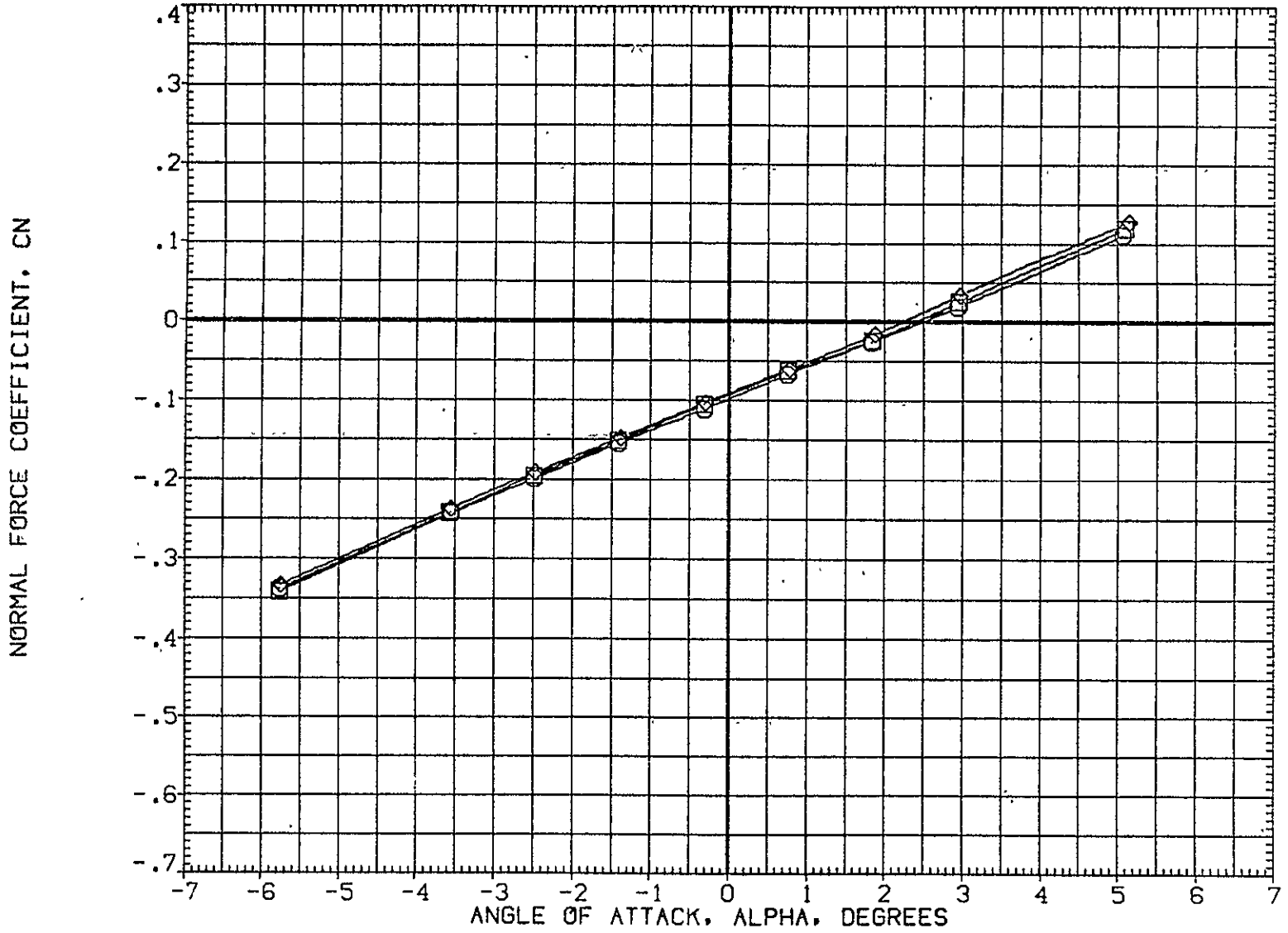


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

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(A1L002)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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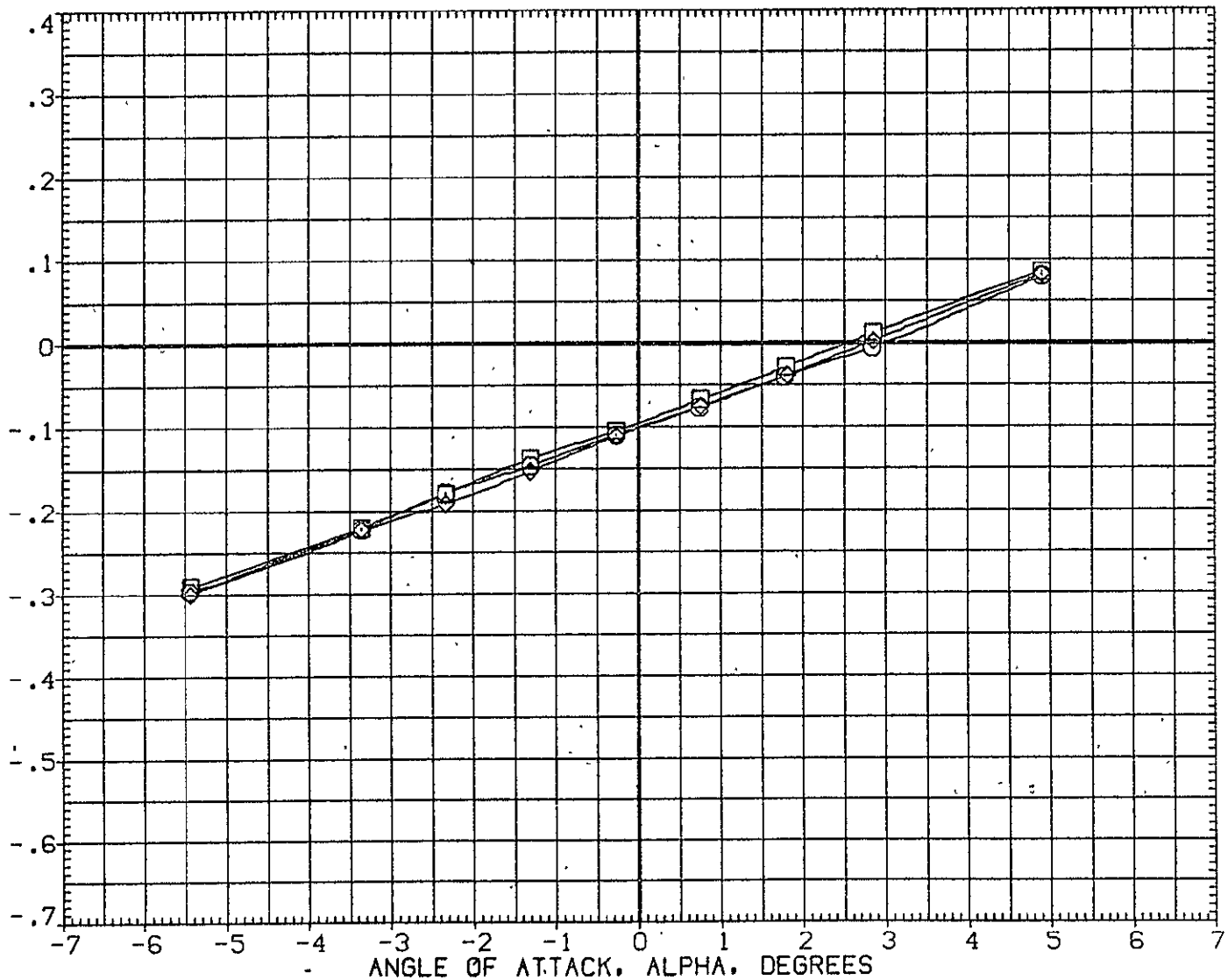


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

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(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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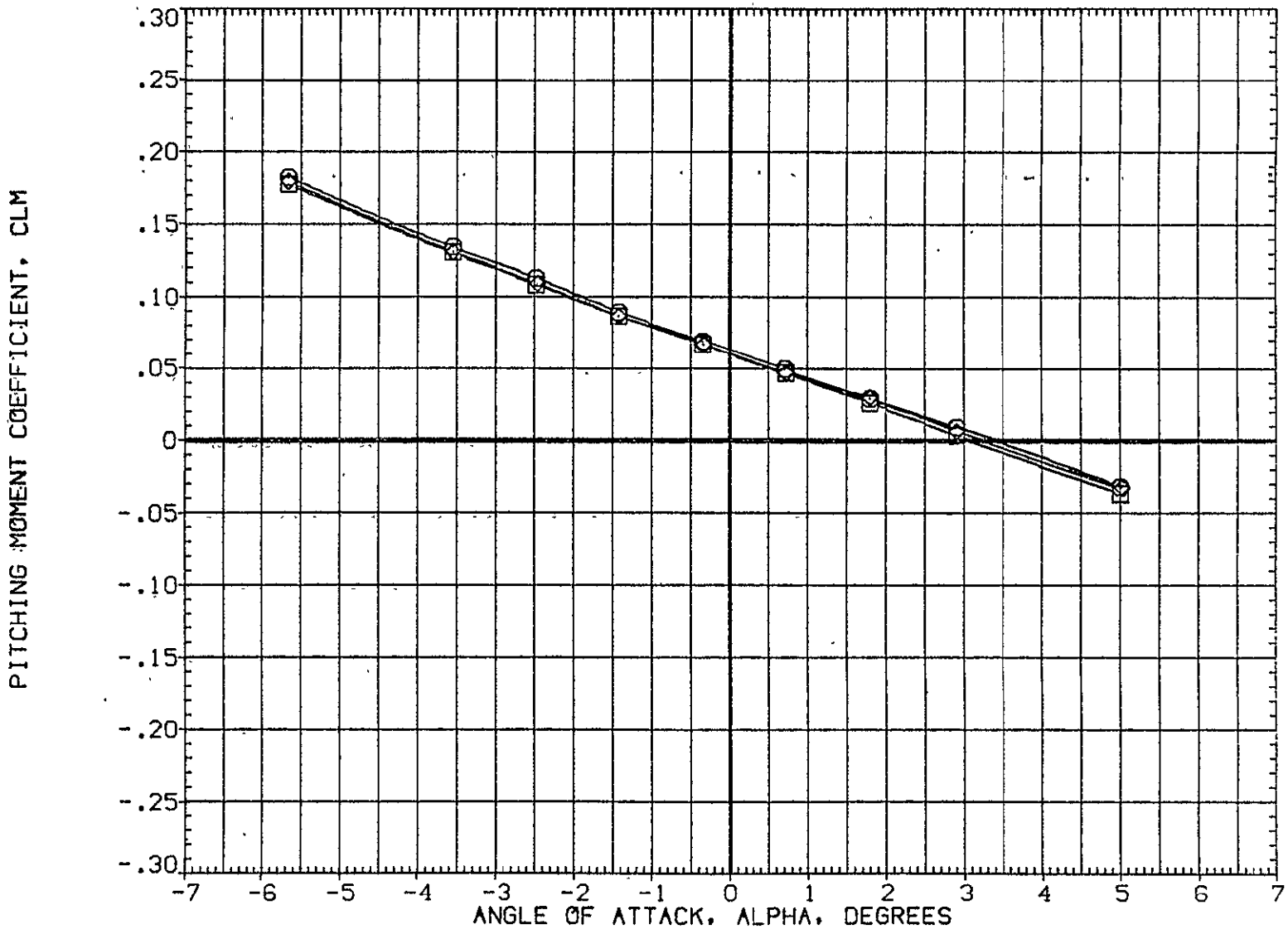


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

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(A1L002)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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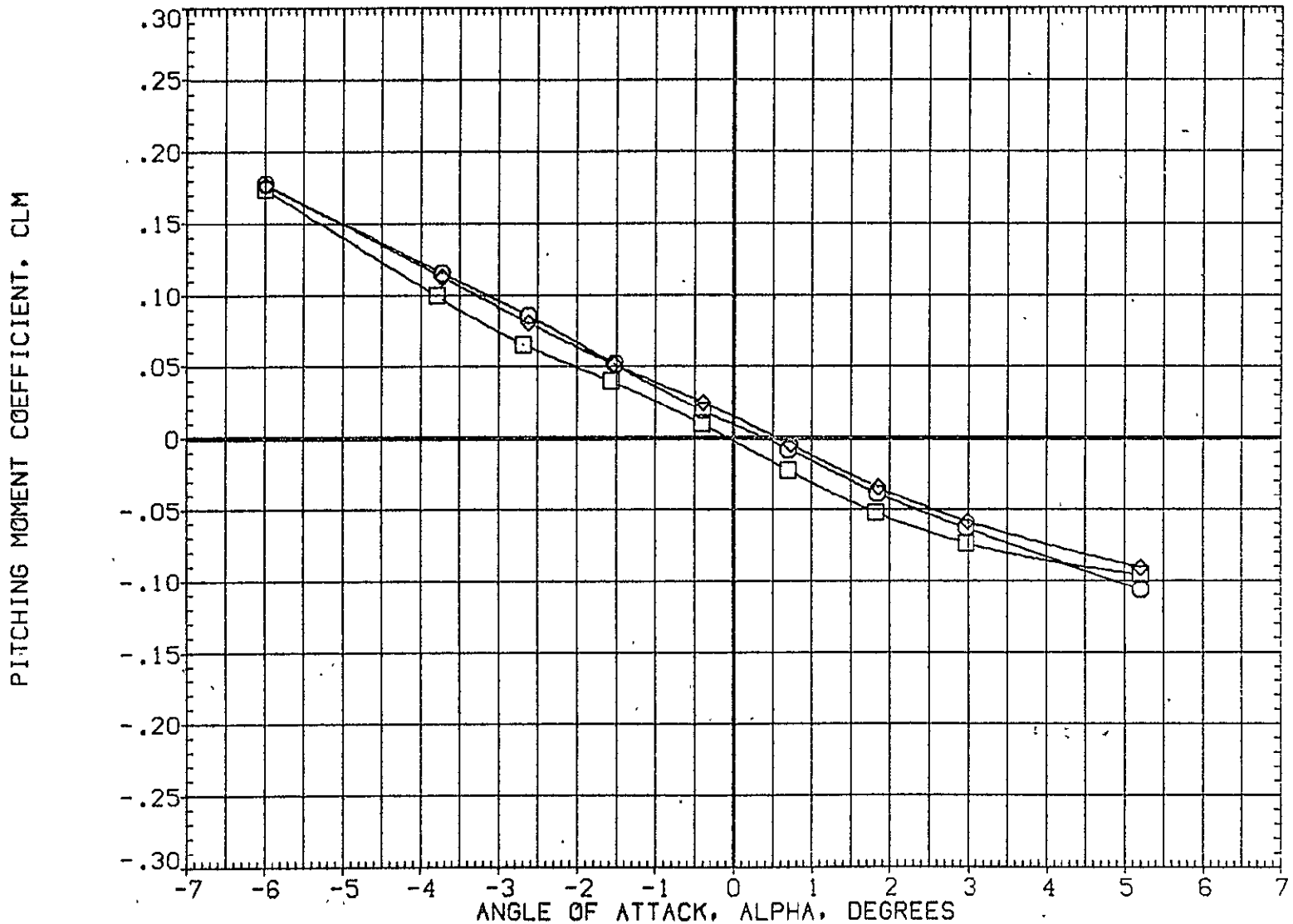


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

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(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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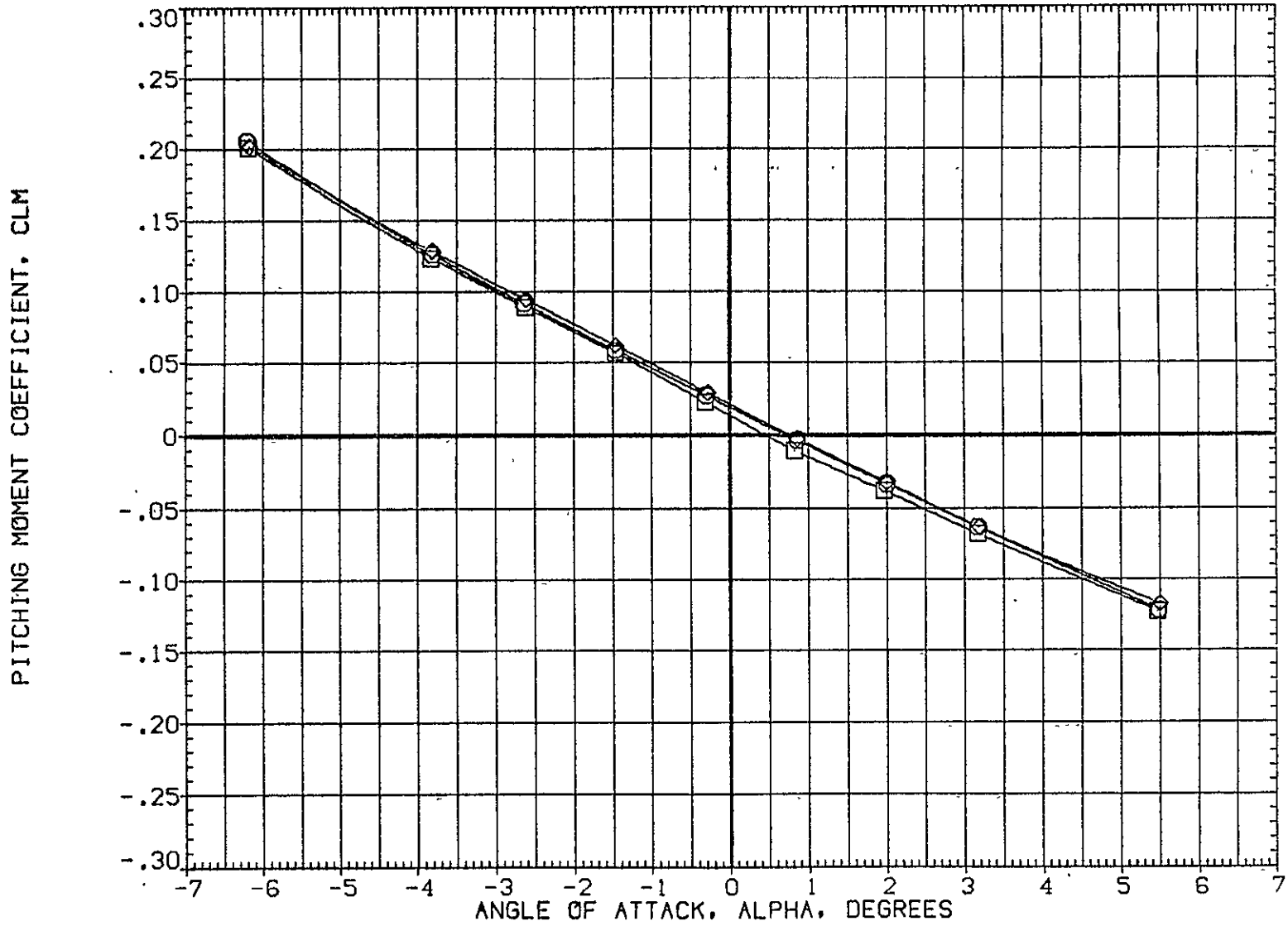


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

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(A1L002)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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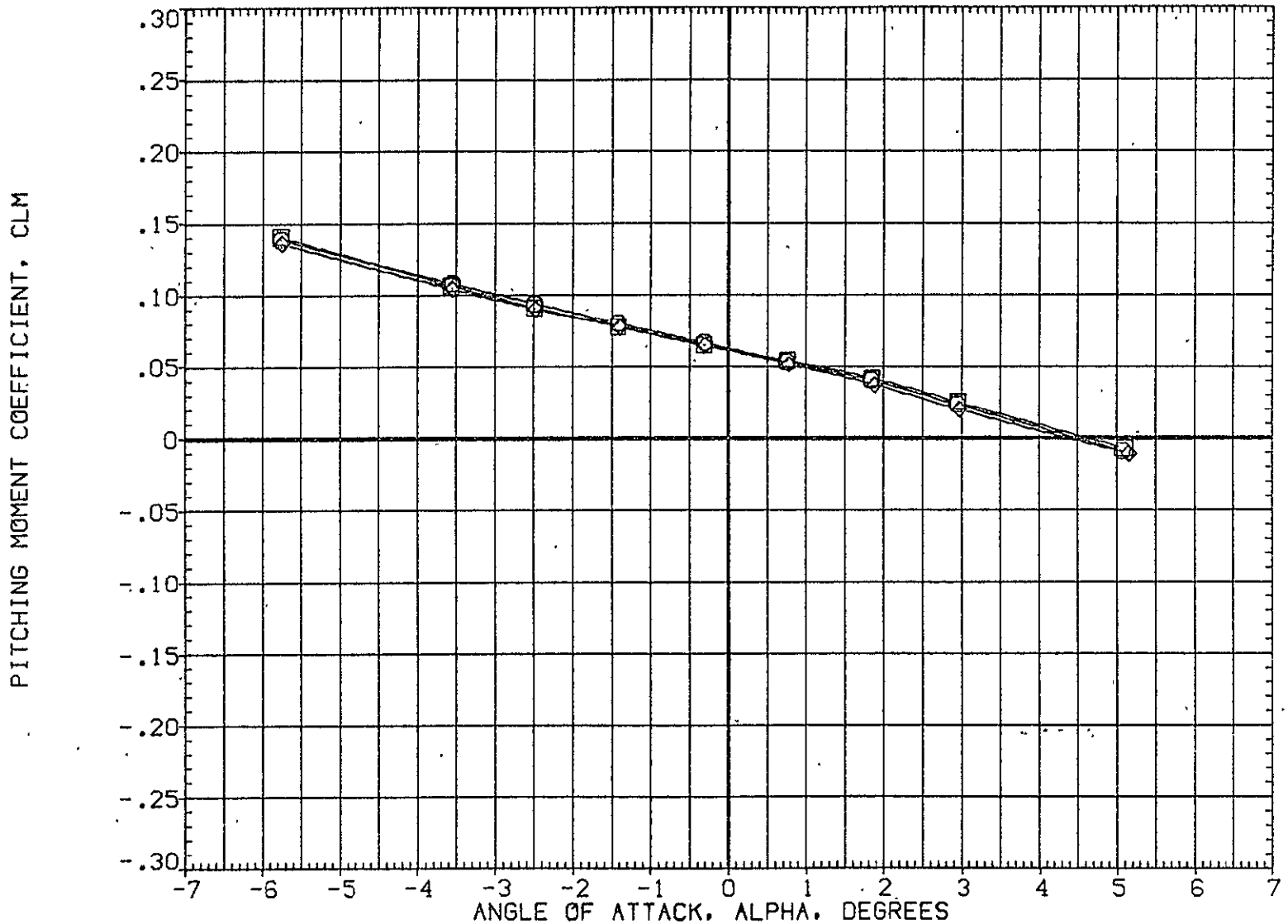


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

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(A1L002)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
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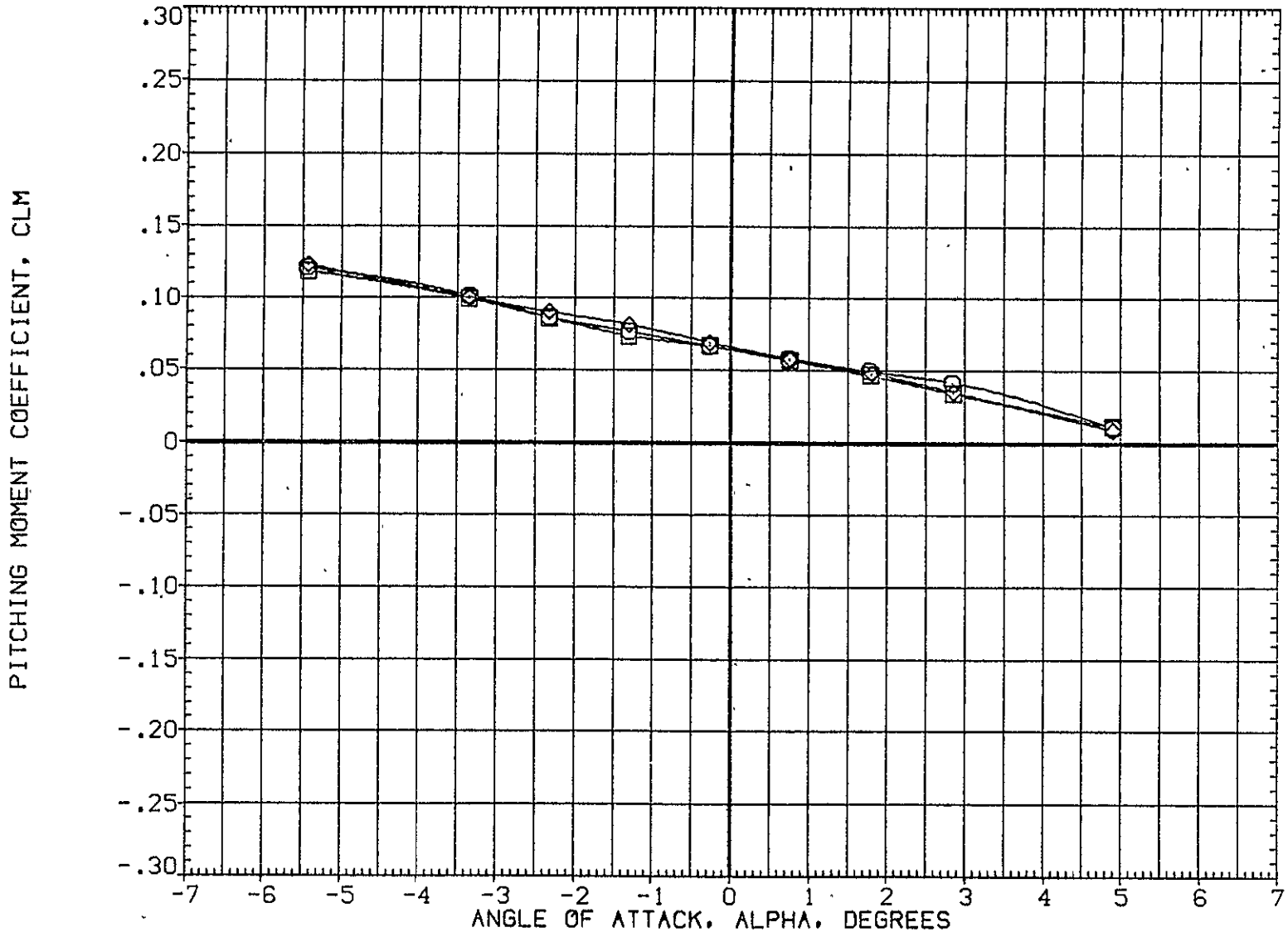
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

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(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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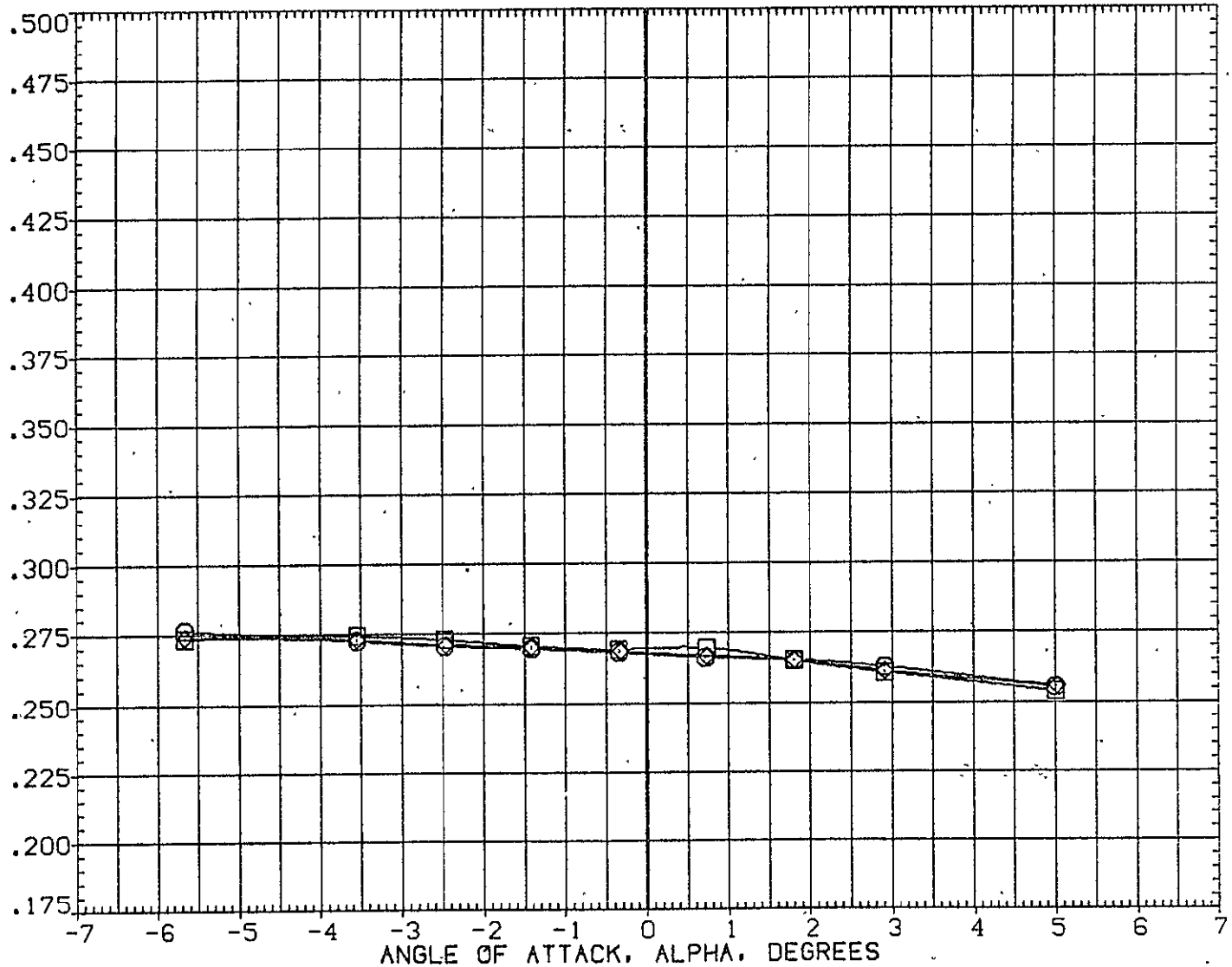


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION, DESCRIPTION		BETA	ORBINC	PHI-S	Z
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(A1L002)	□	MSFC TWT 600 (FA14)	01TIS1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1F3	.000	.000	90.000	.140

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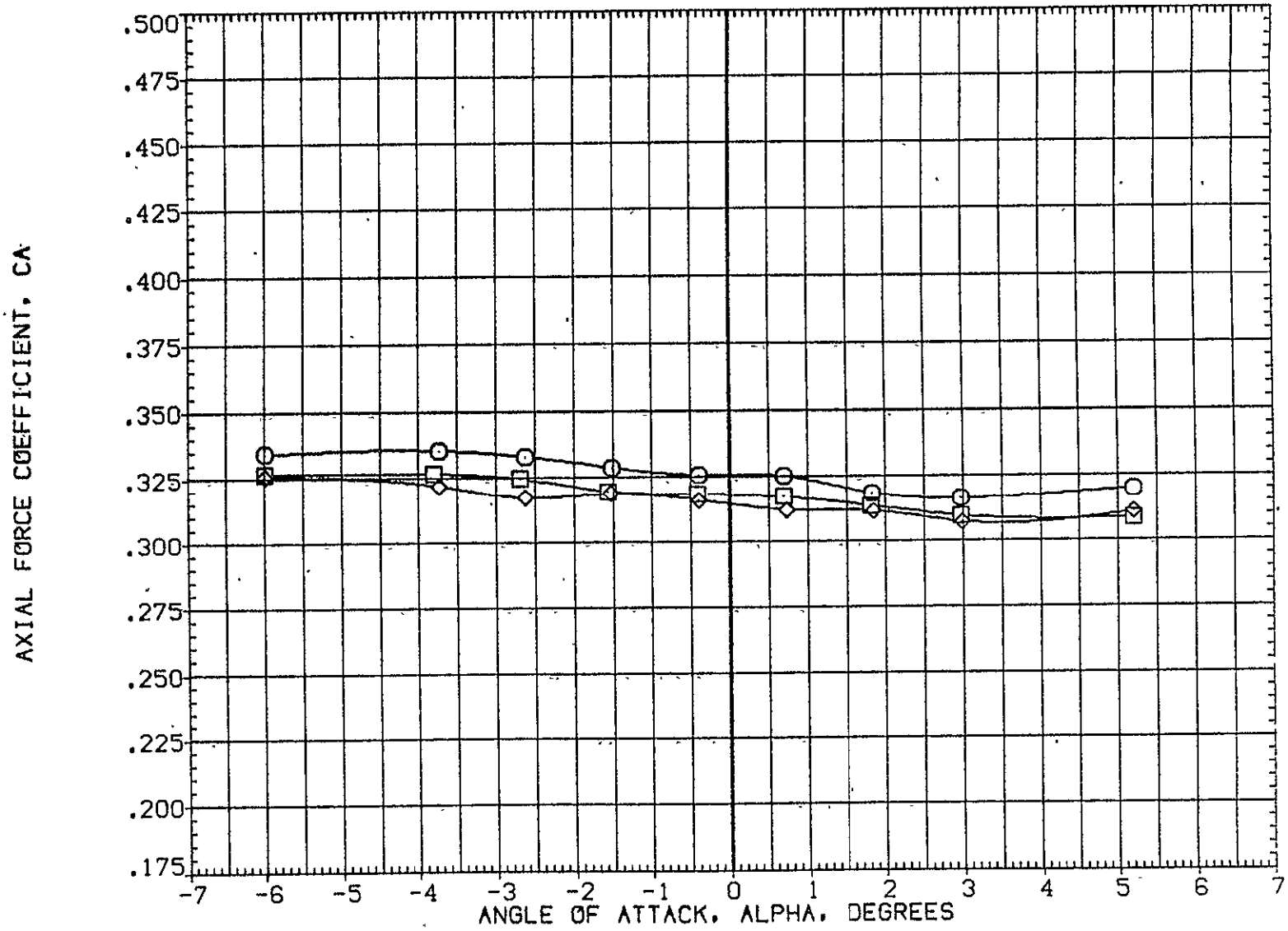
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

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(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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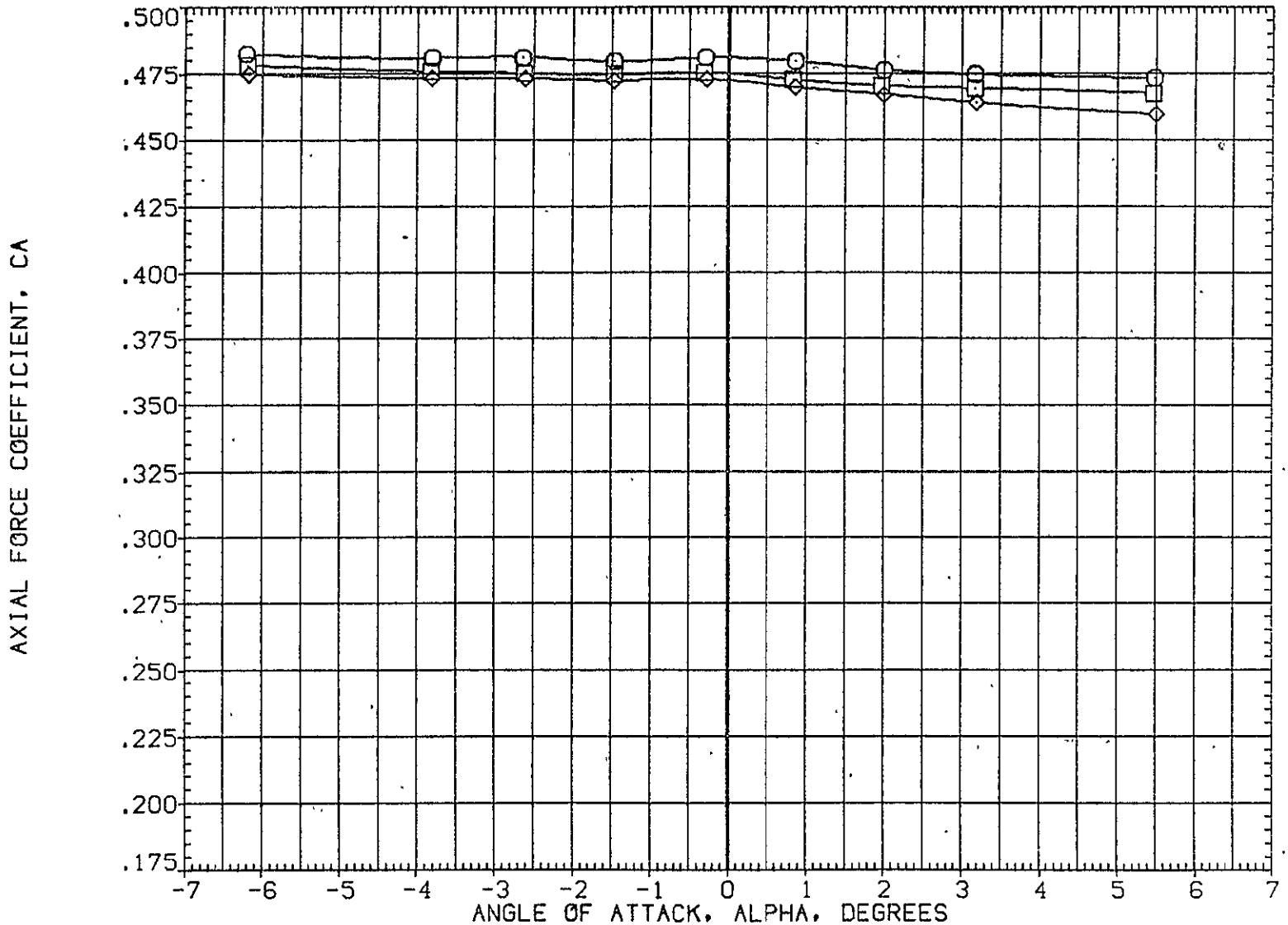
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

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(A1L002)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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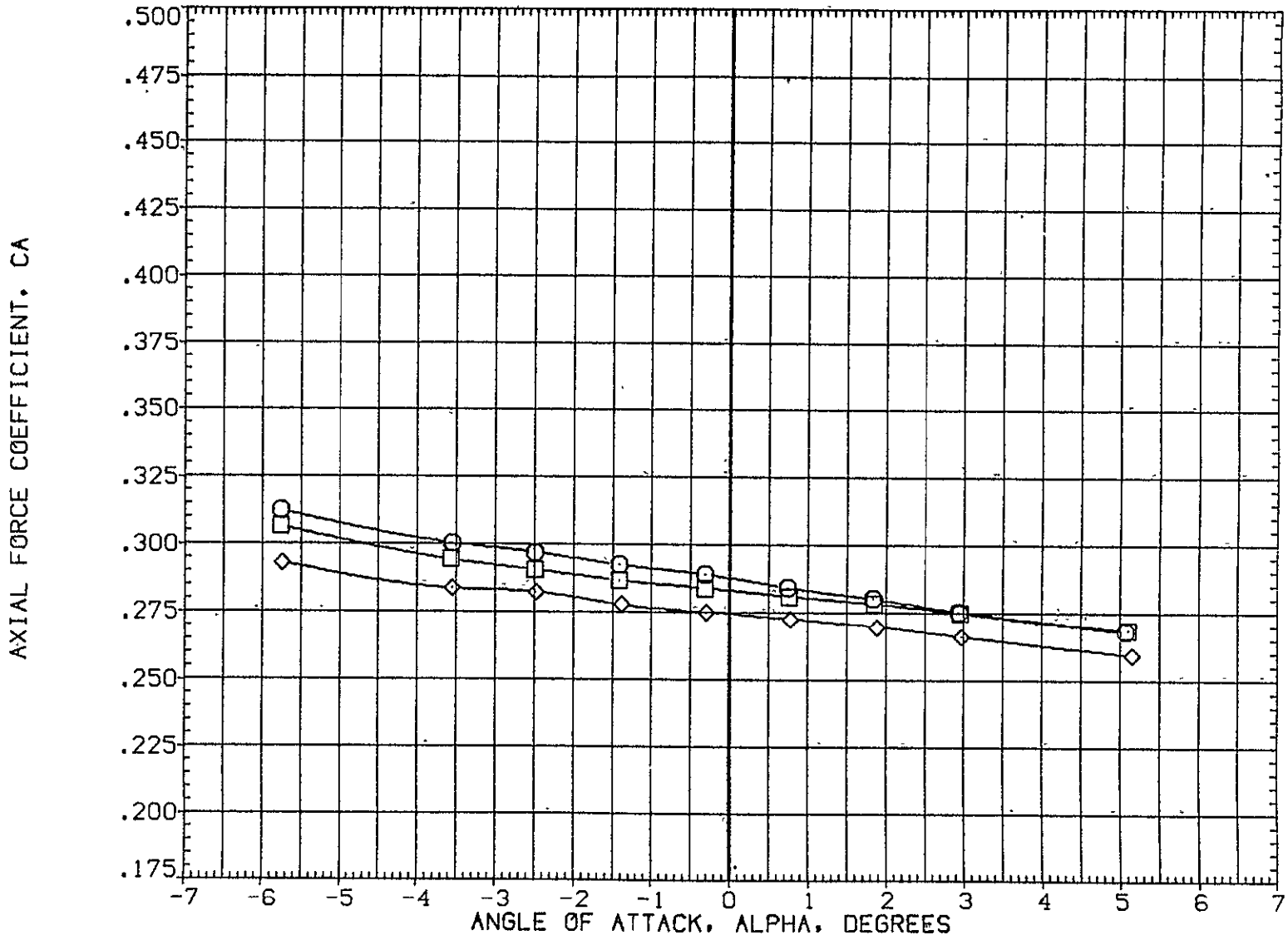


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

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(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
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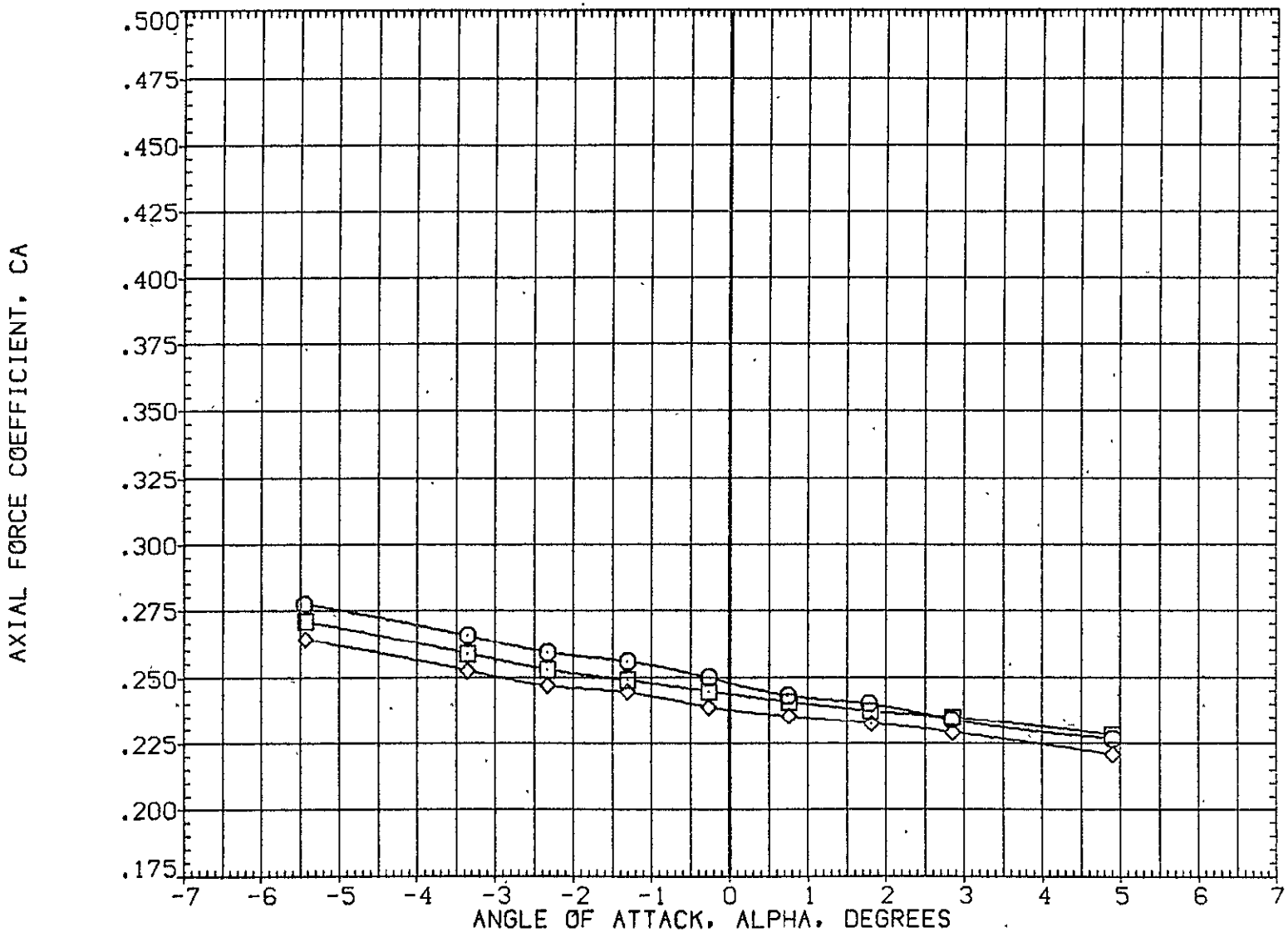


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

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(A1L002)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

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ZMRP	.0000	IN. ZT
SCALE	.0040	

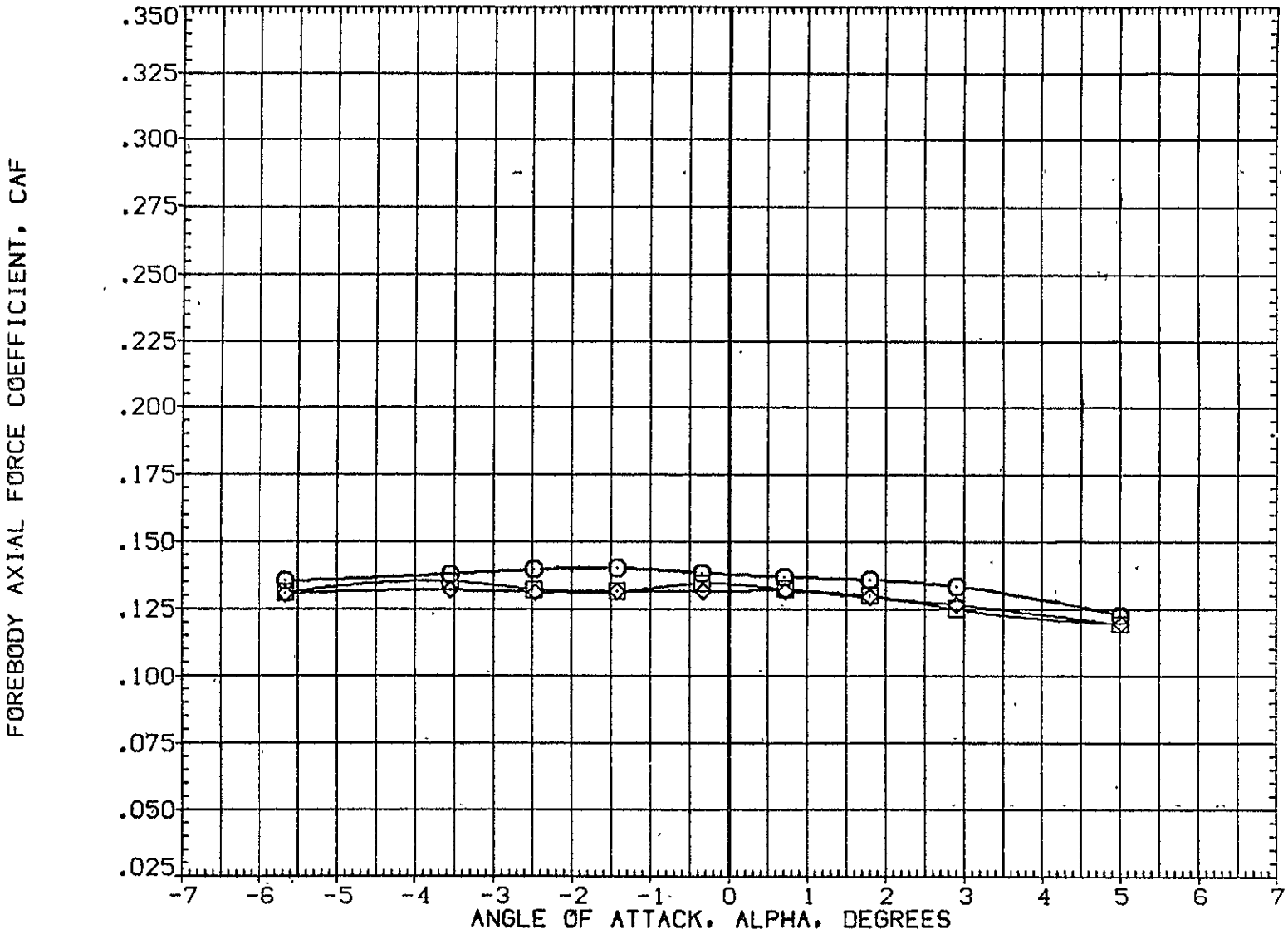


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L001)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

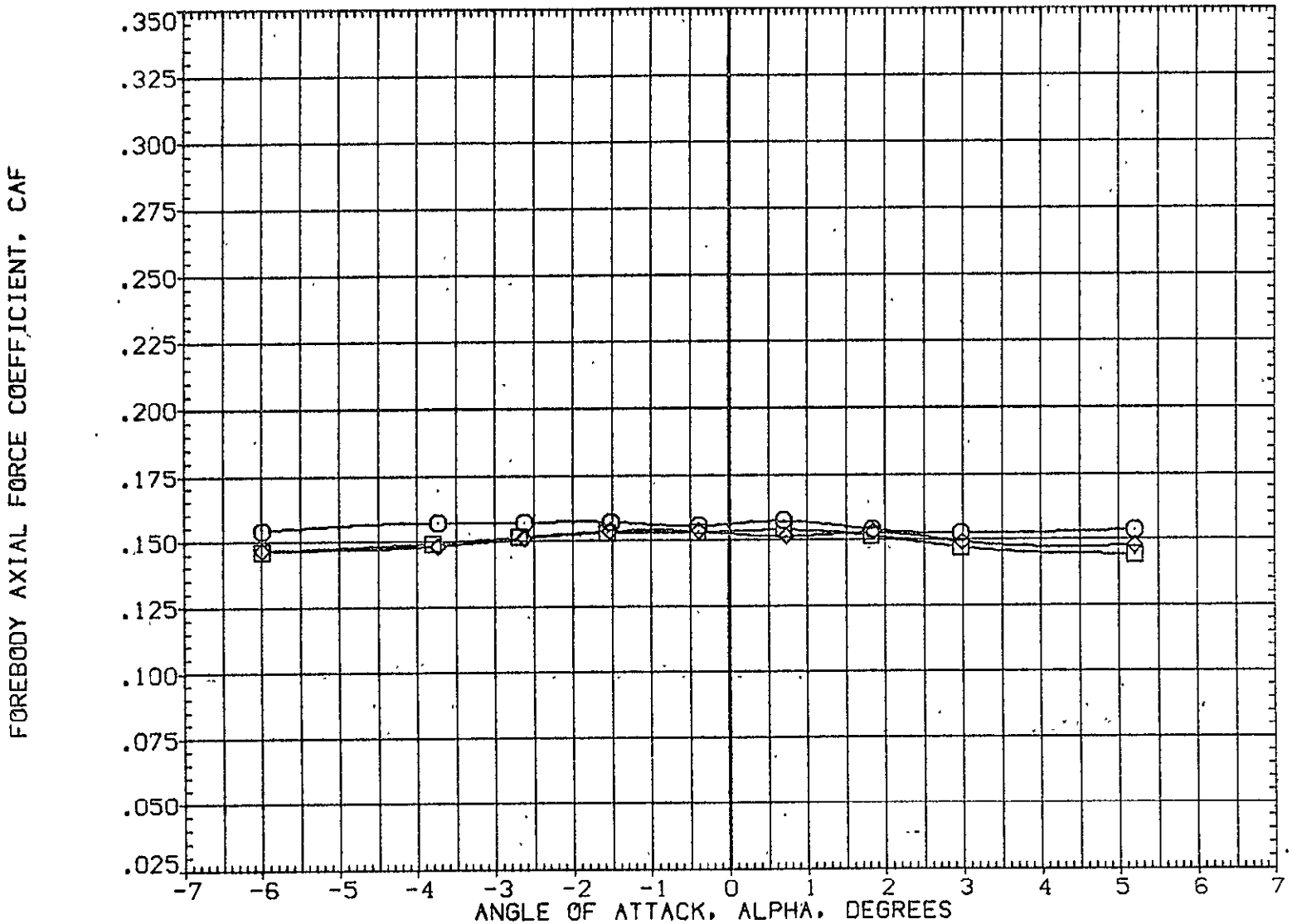


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

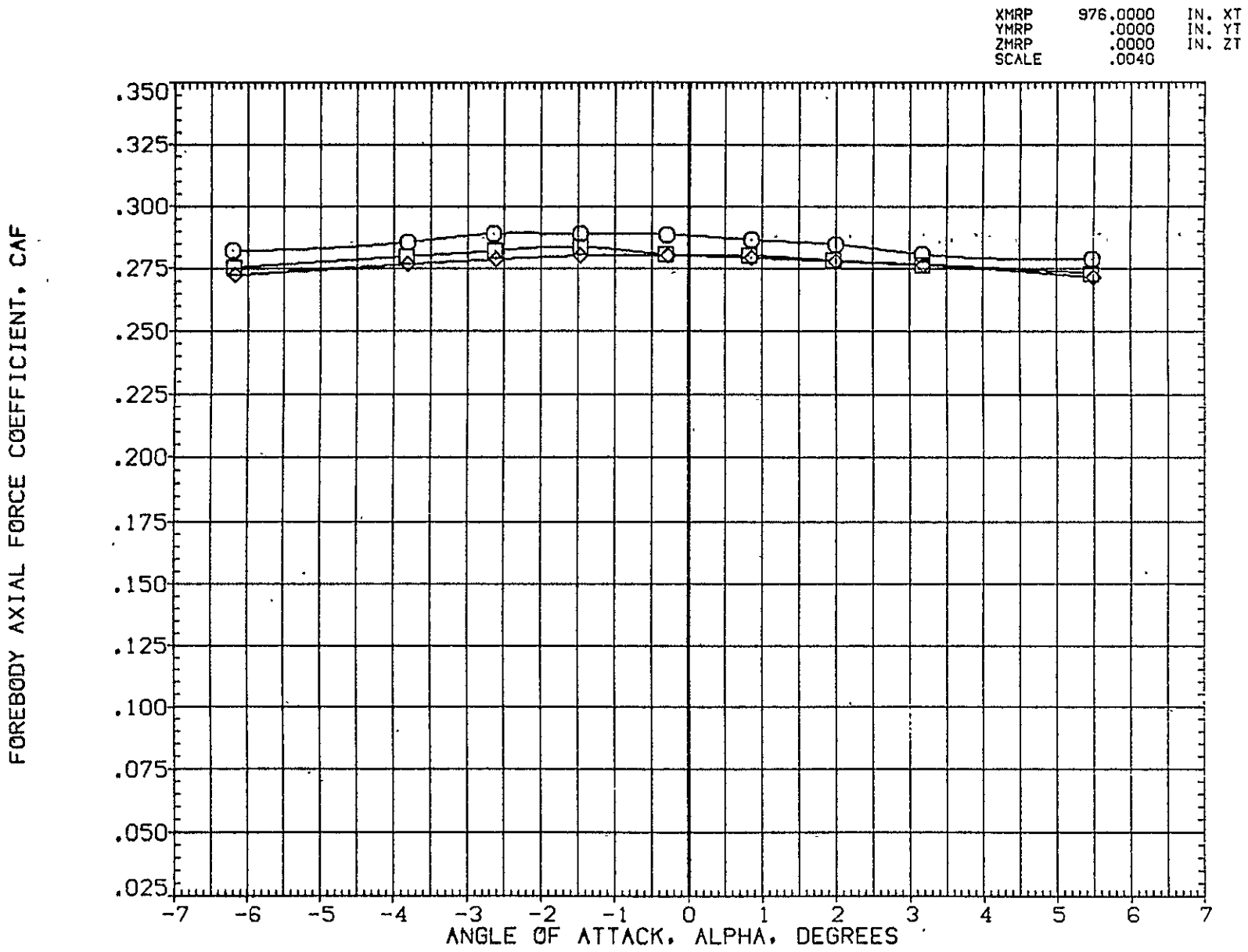
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L001)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90



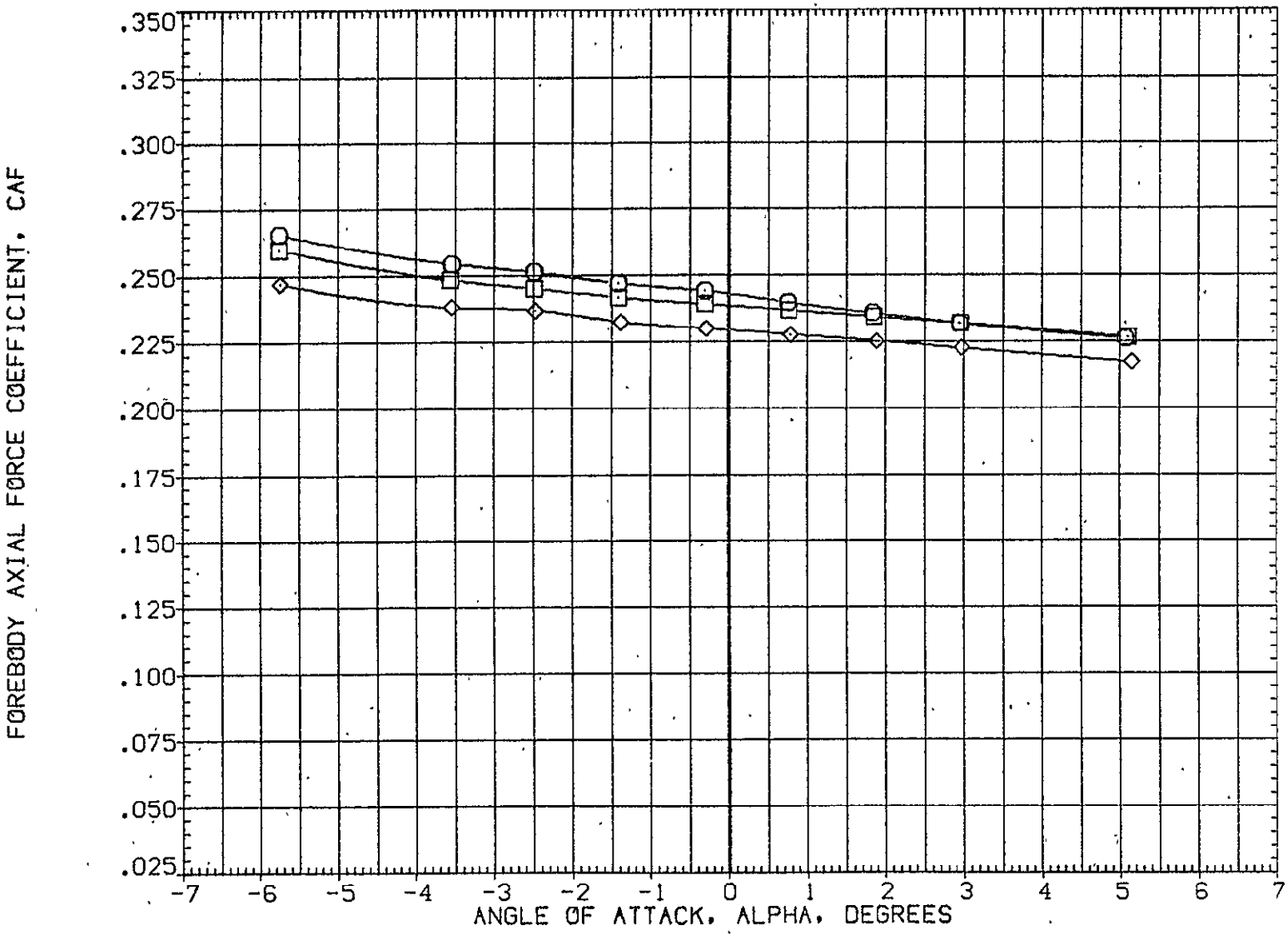
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILOO1)	○	MSFC TWT 600 (FA14)	01TIS1A1R1K1F1	.000	.000	90.000	.140
(AILOO2)	□	MSFC TWT 600 (FA14)	01TIS1A1R1K1F2	.000	.000	90.000	.140
(AILOO3)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

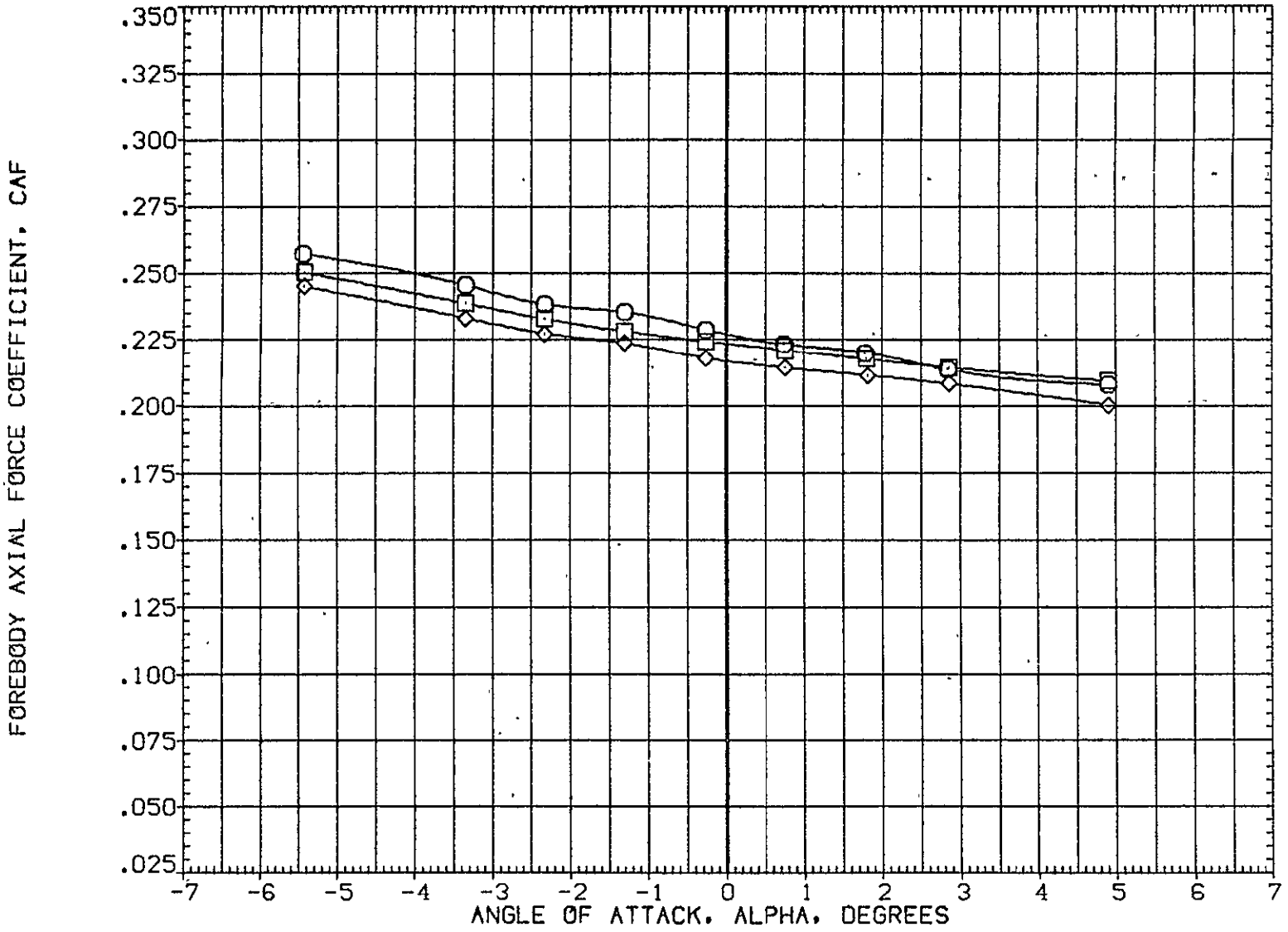


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L001)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

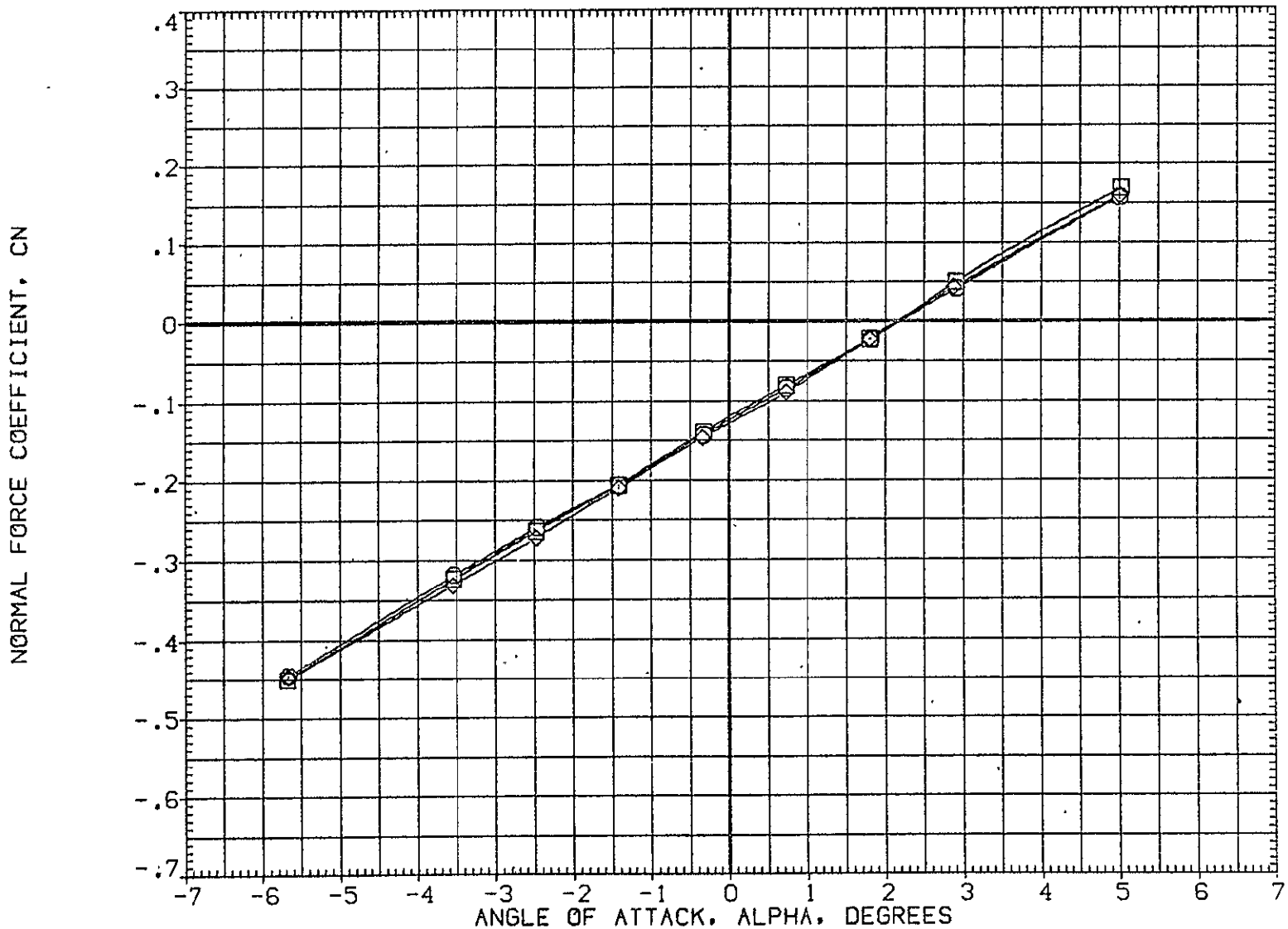


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

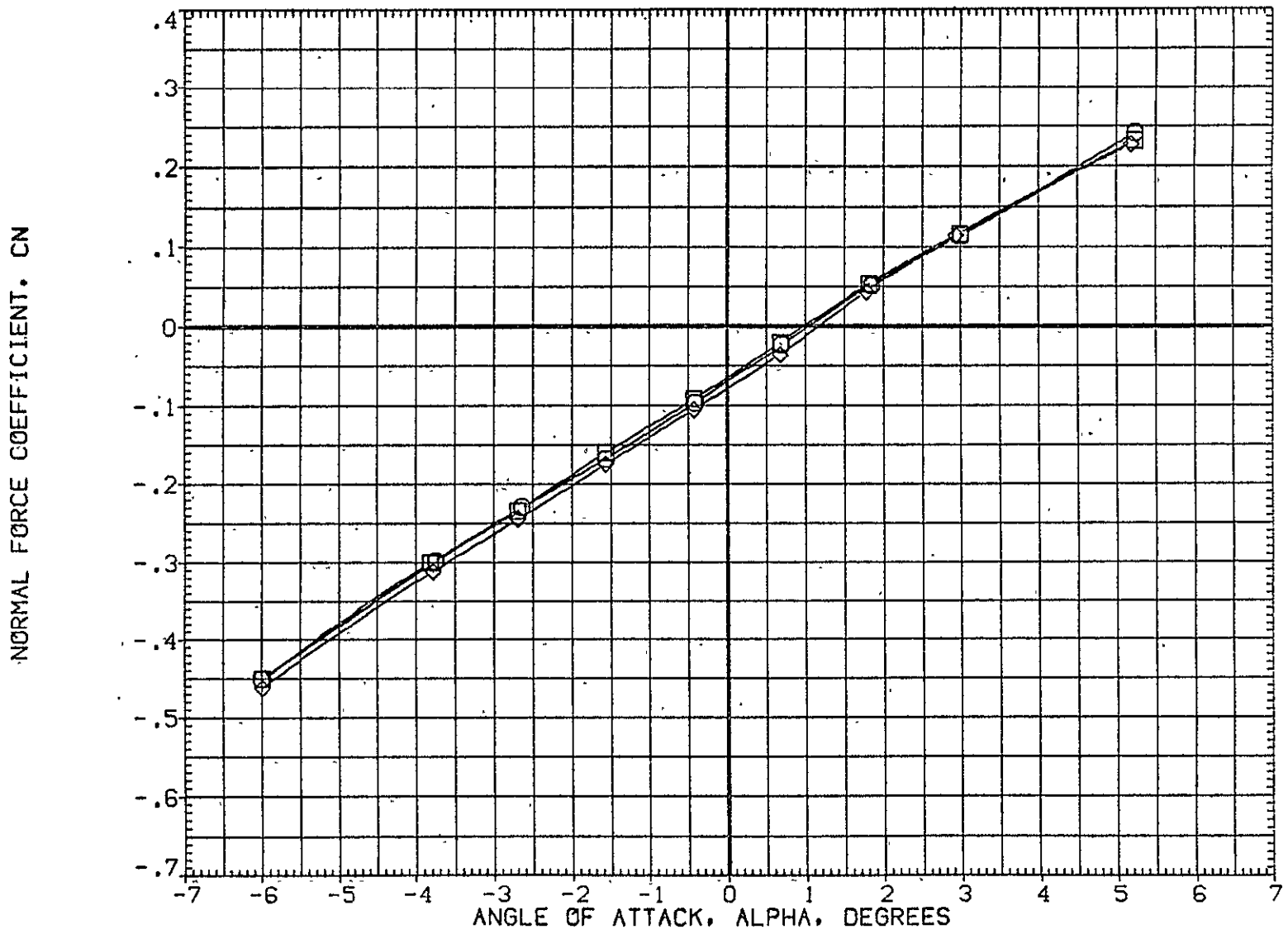


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



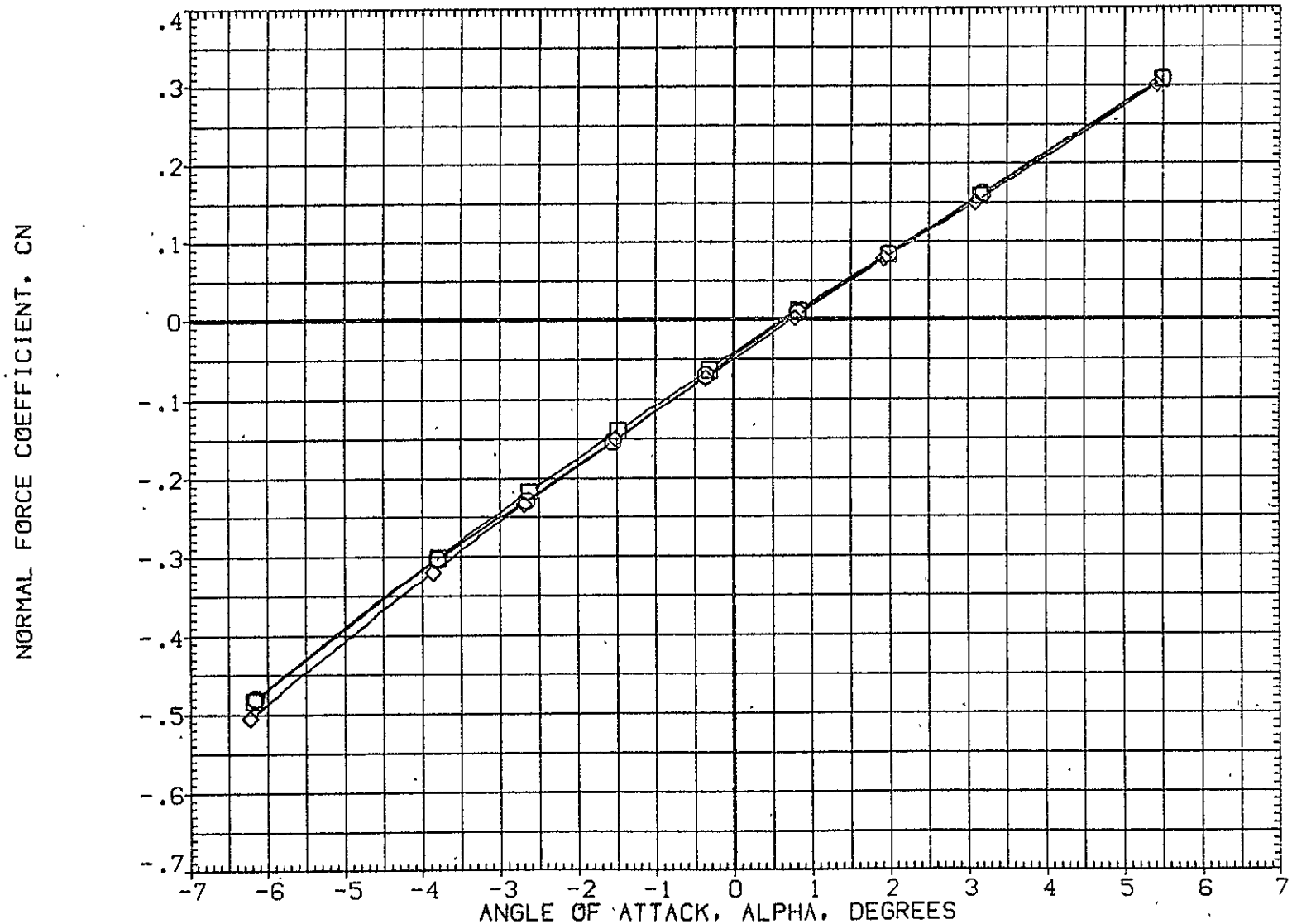
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



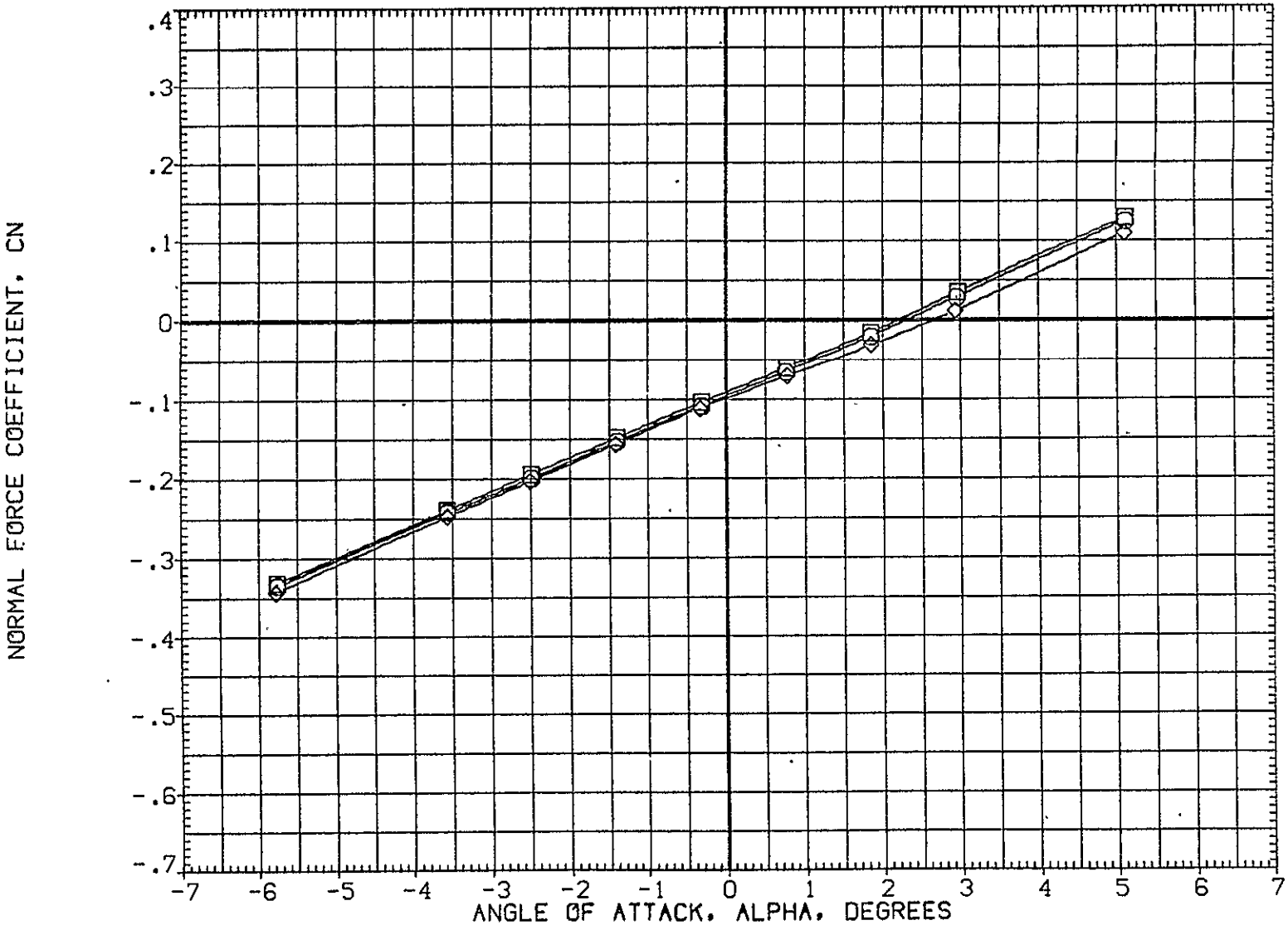
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(CIL004)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(AIL005)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(AIL006)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

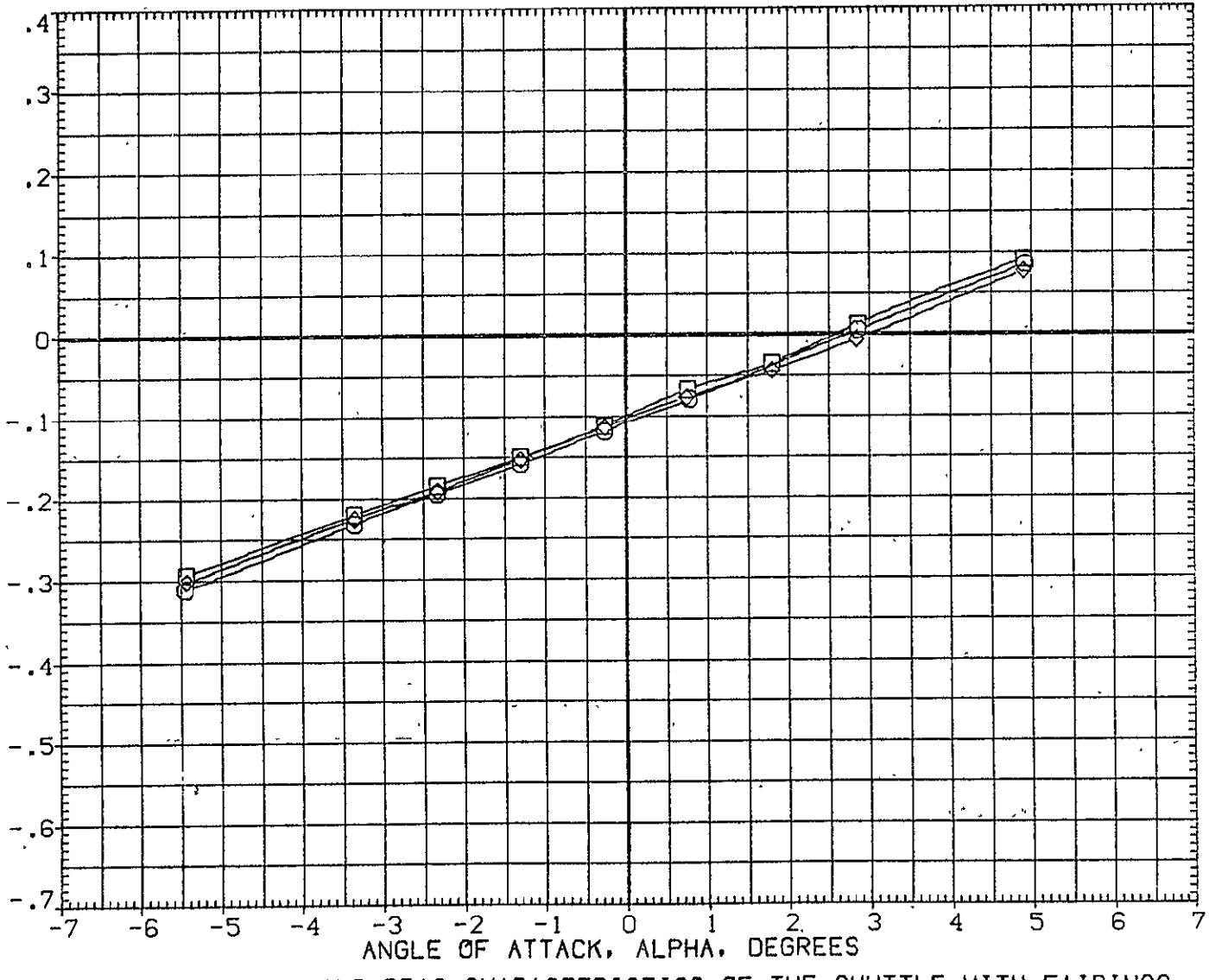


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

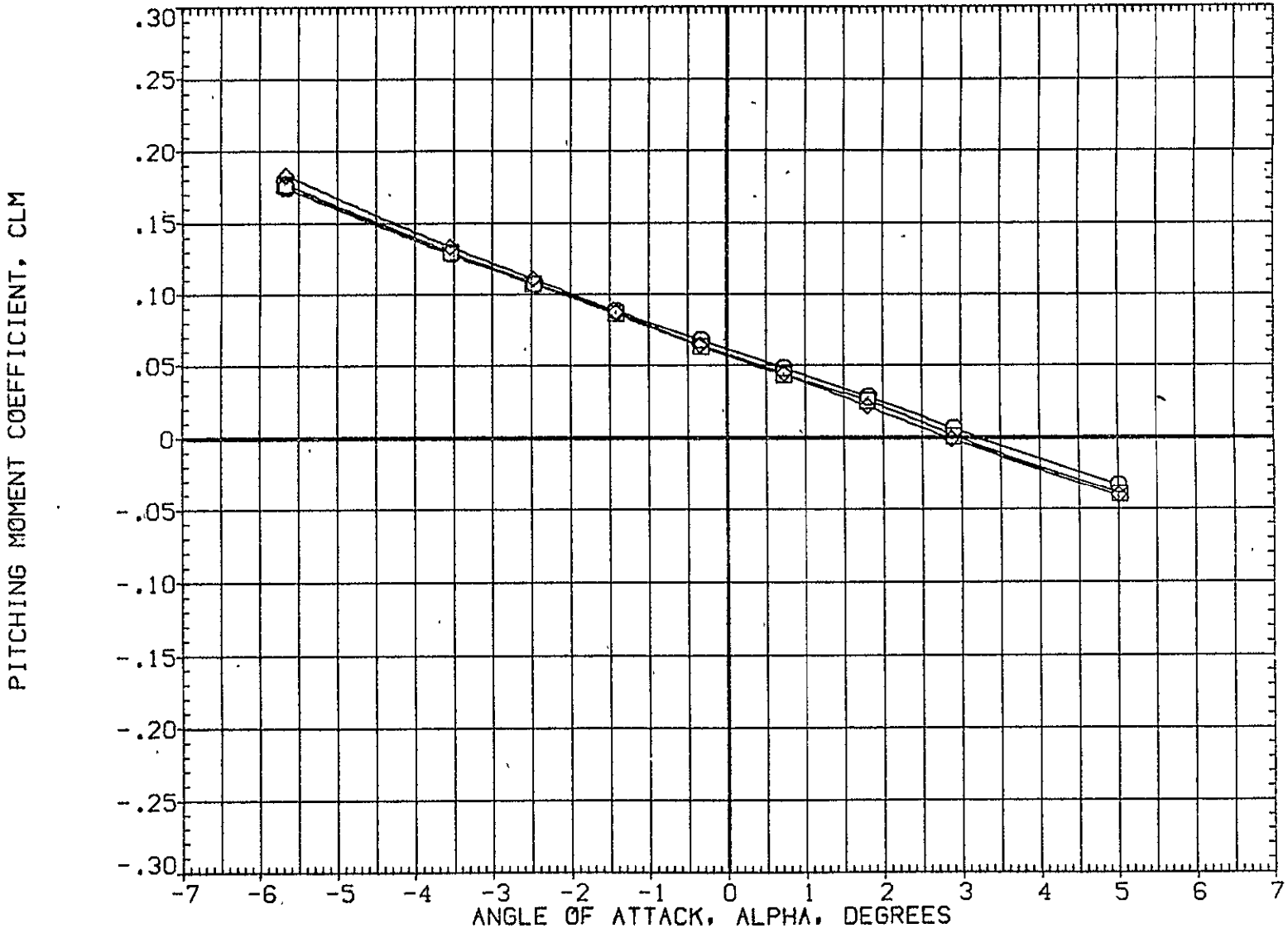


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



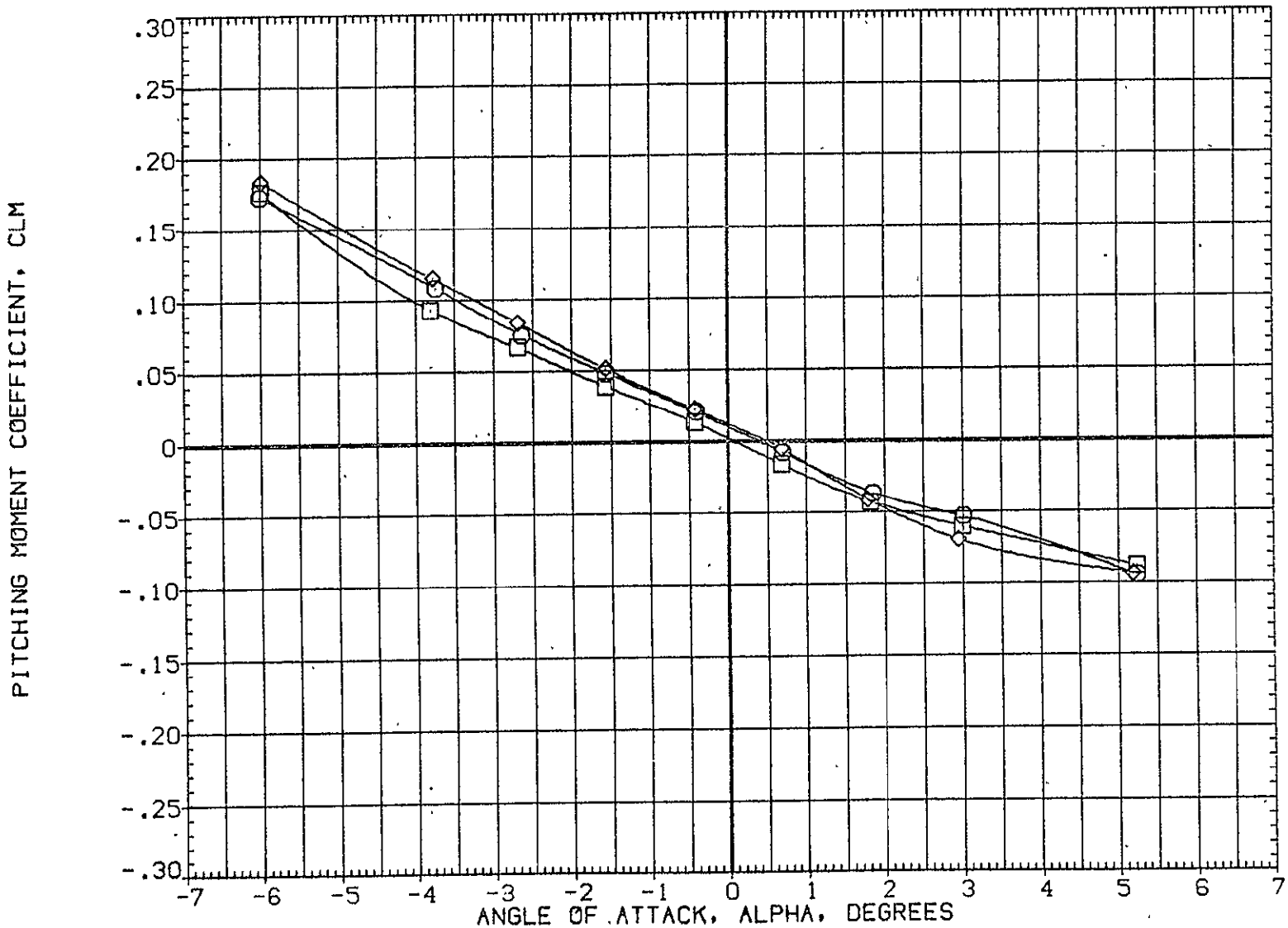
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

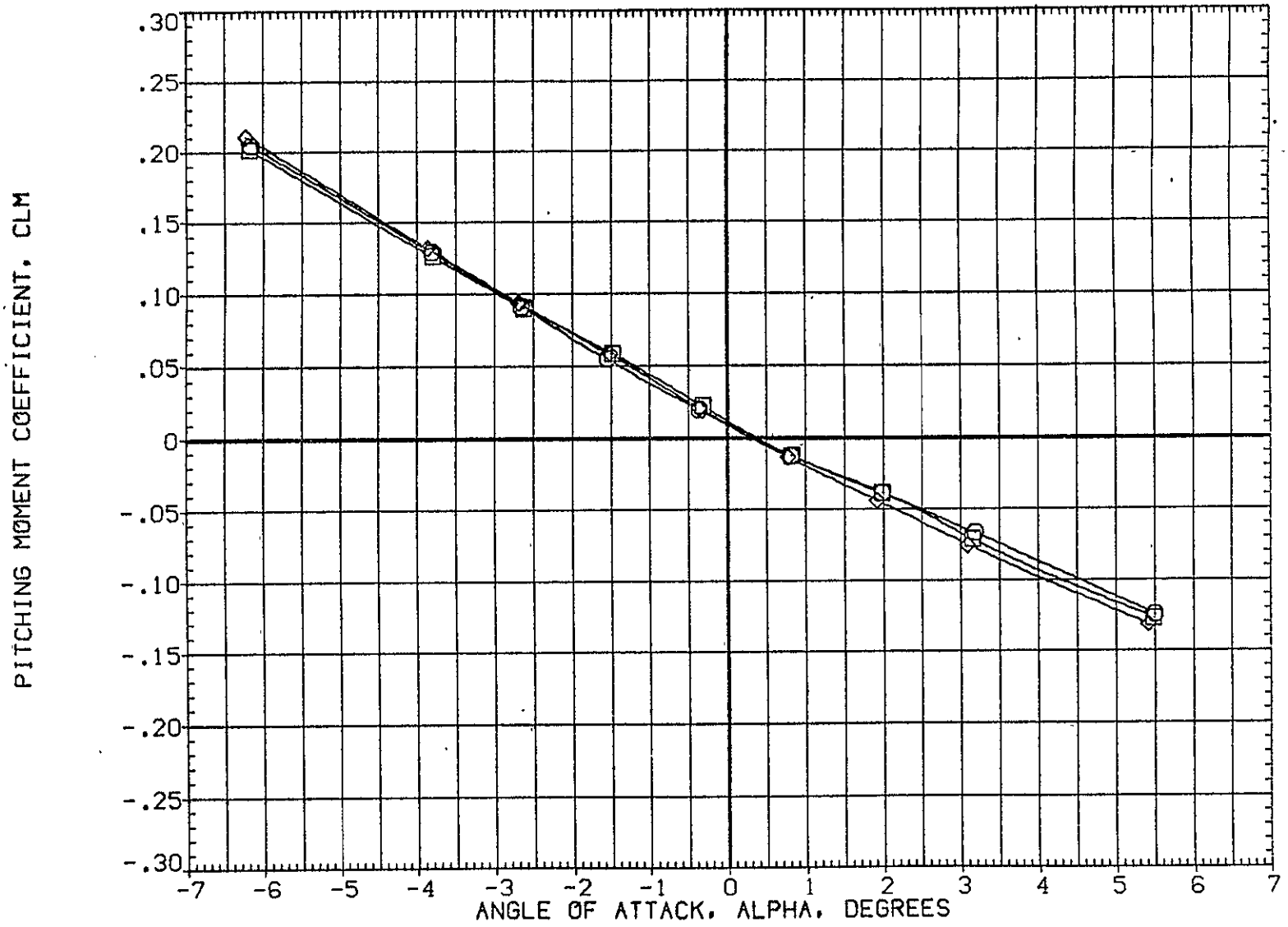


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



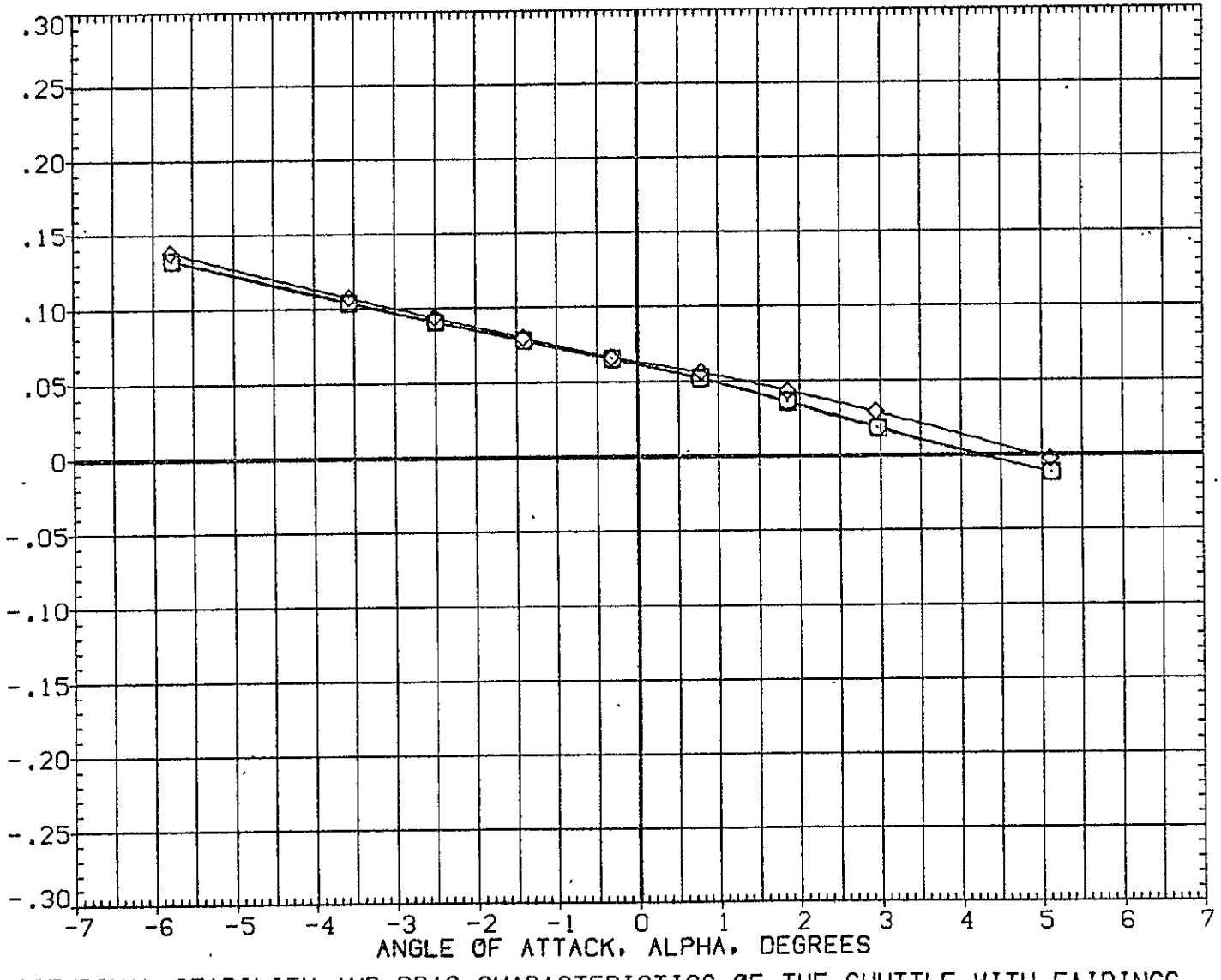
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



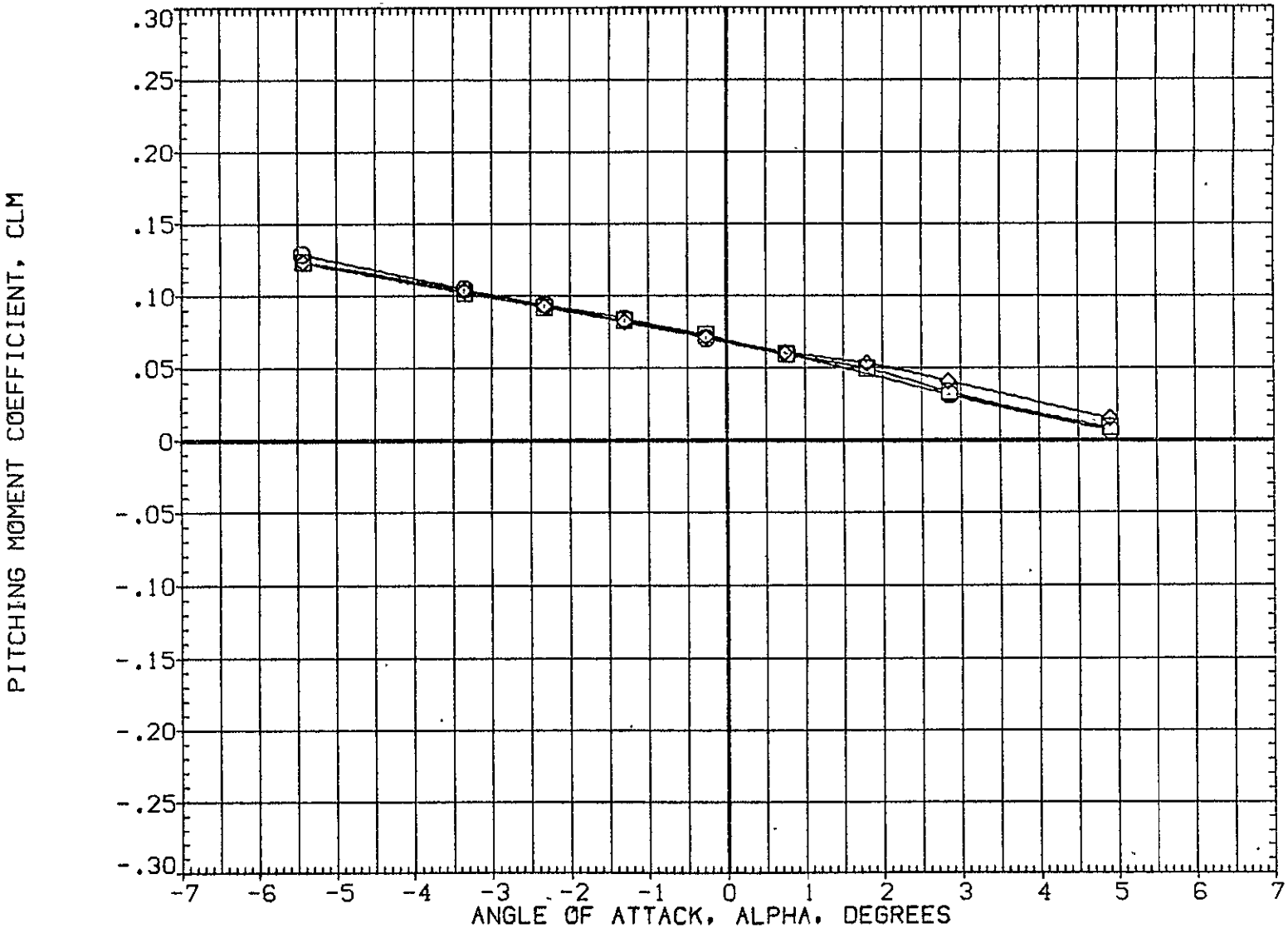
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE.	.0040	

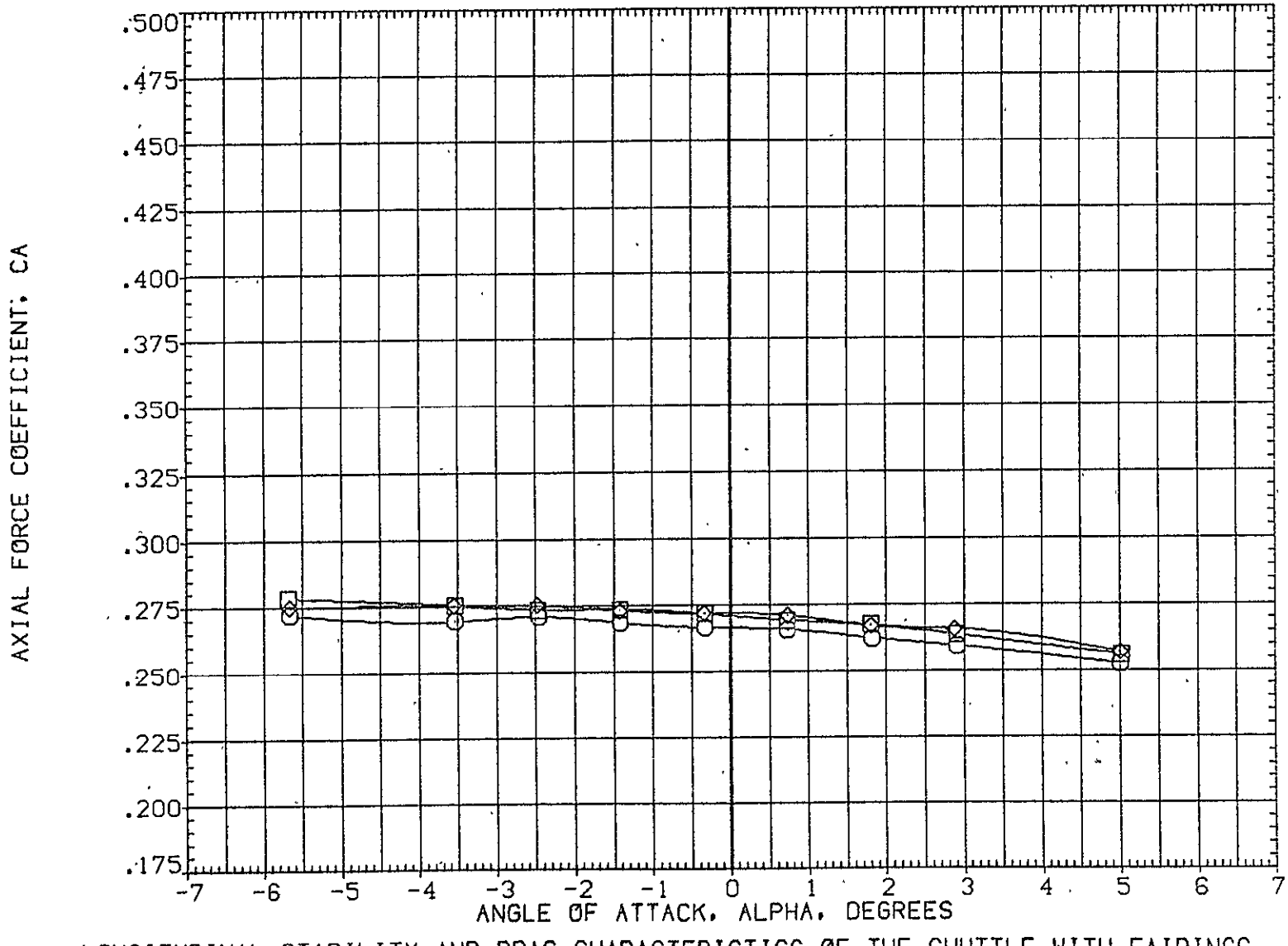


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

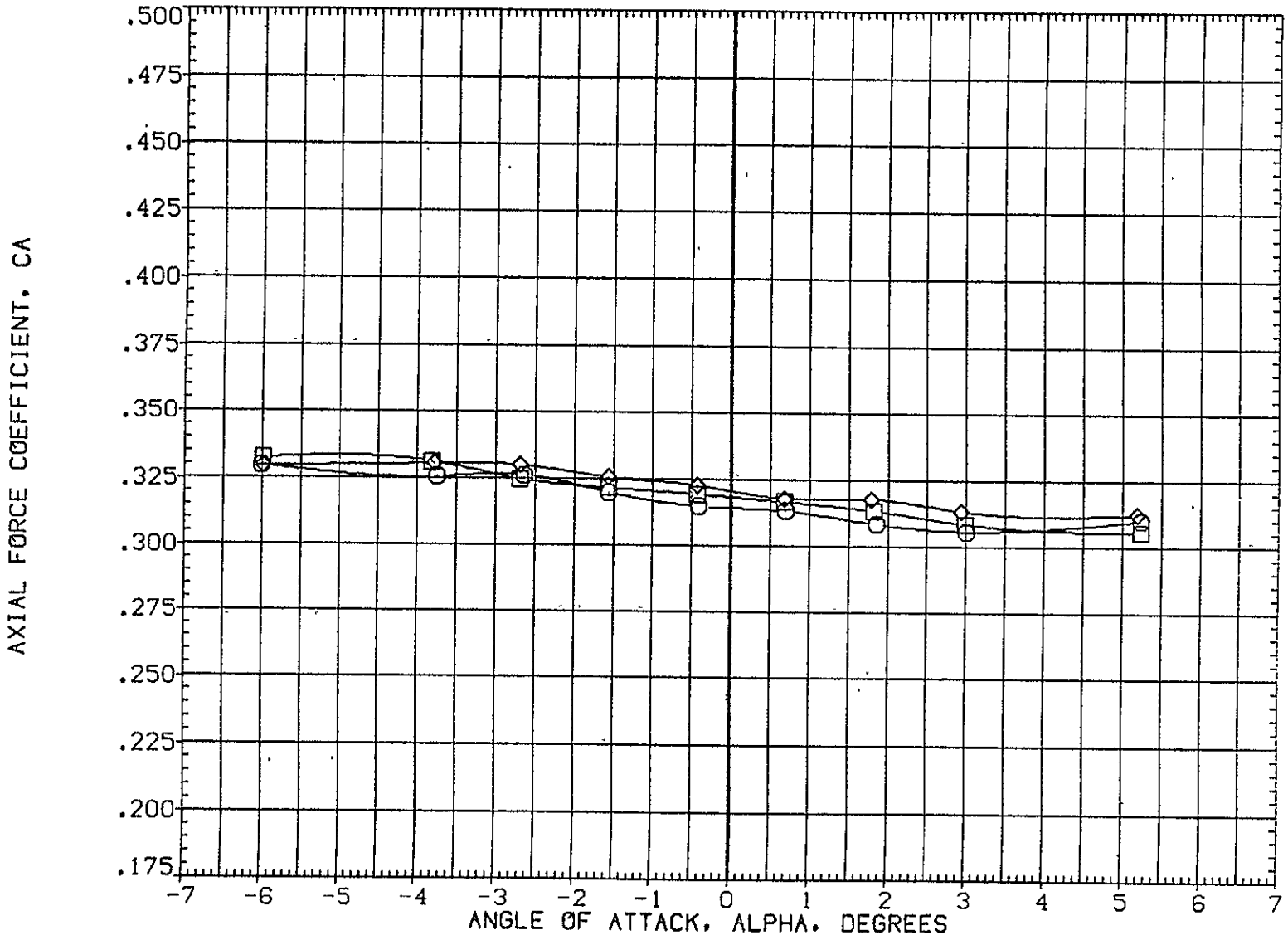


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

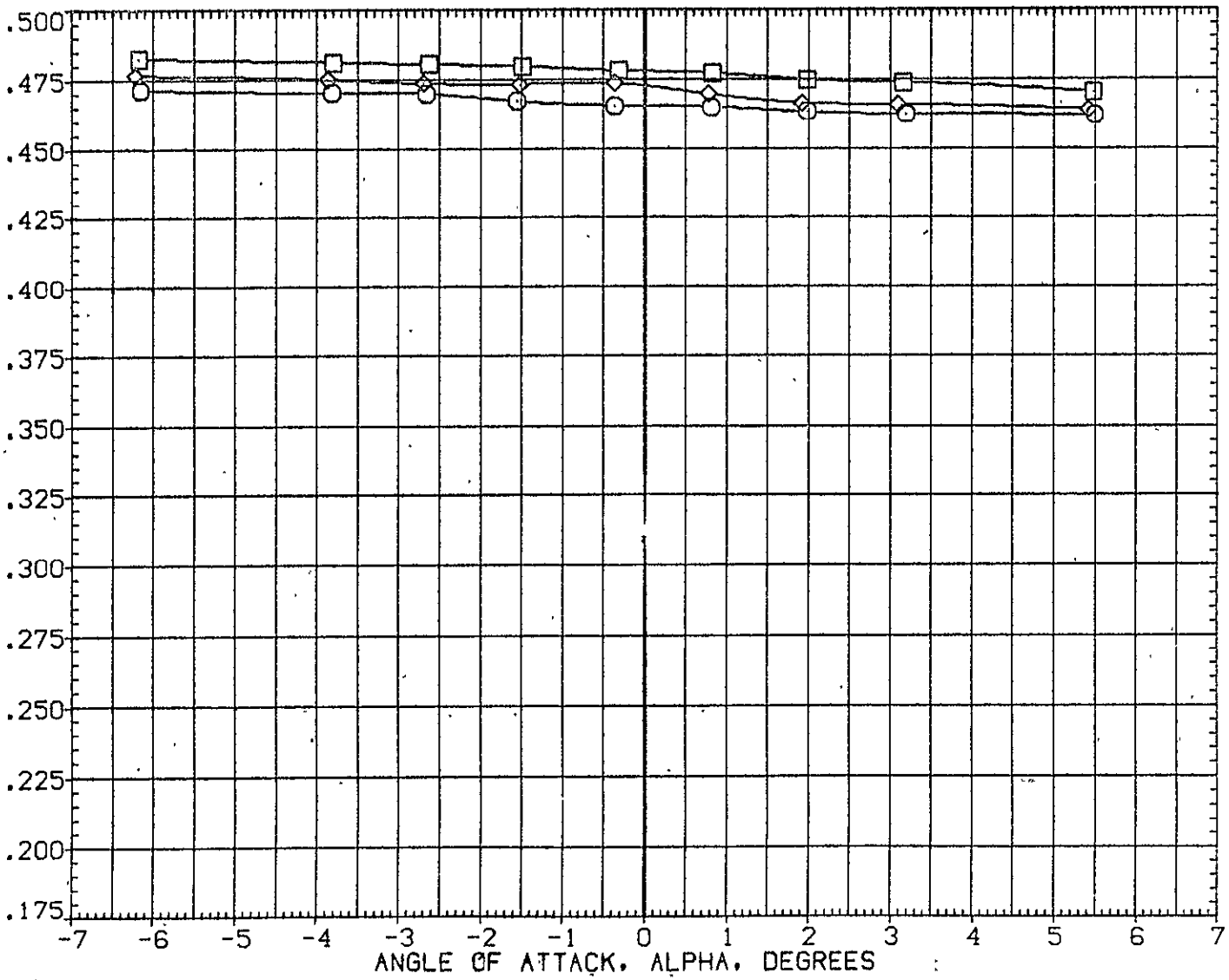


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

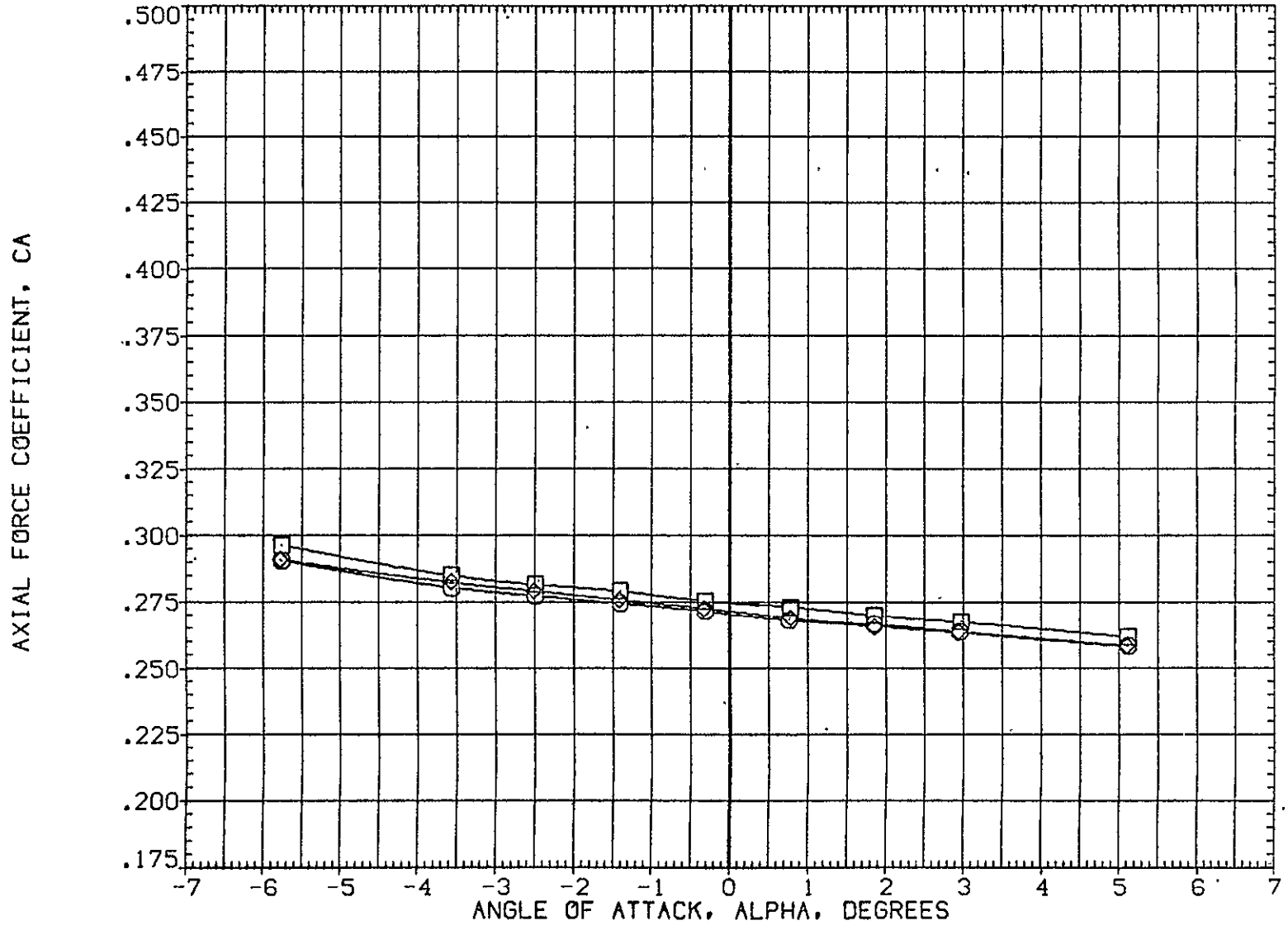


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



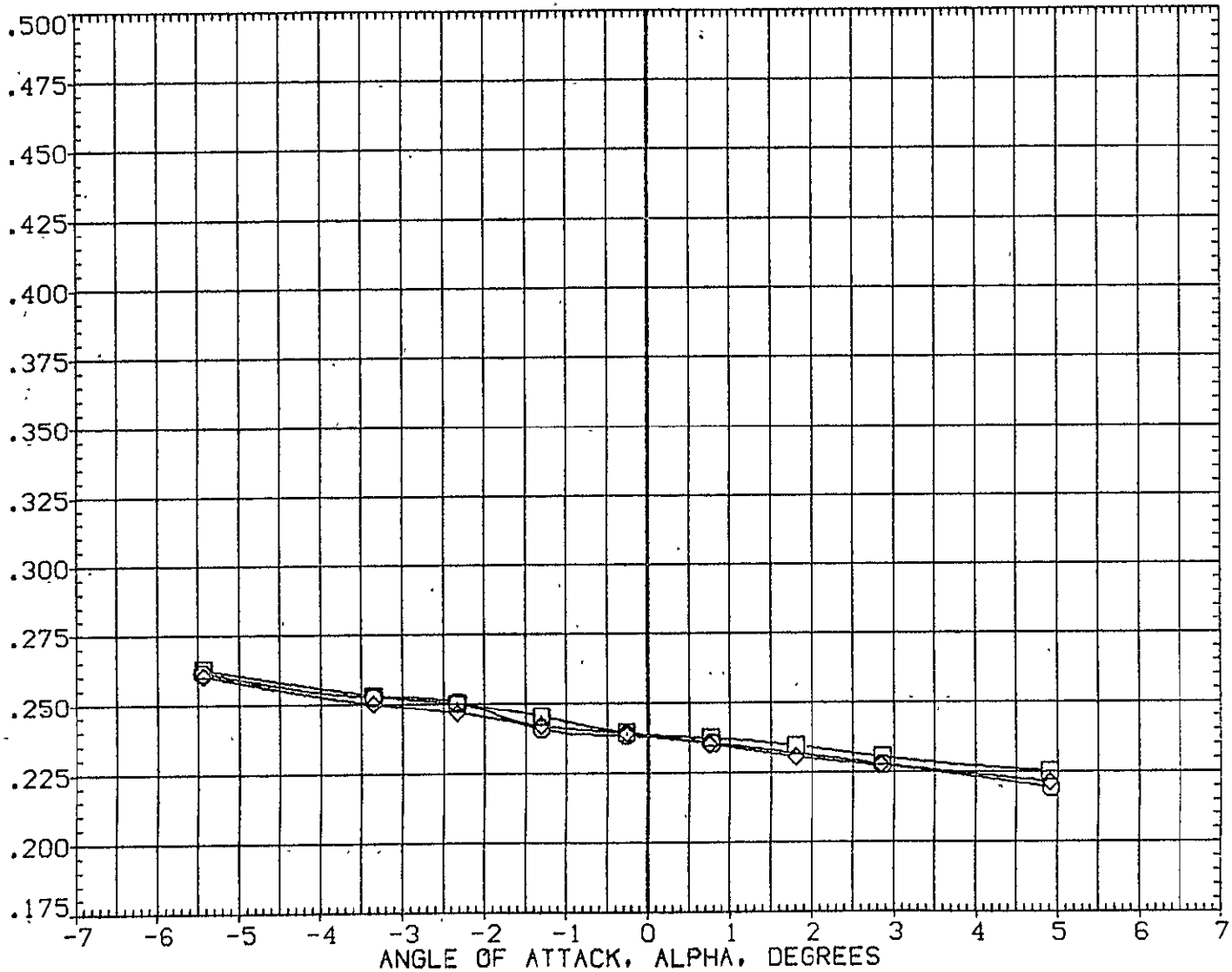
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

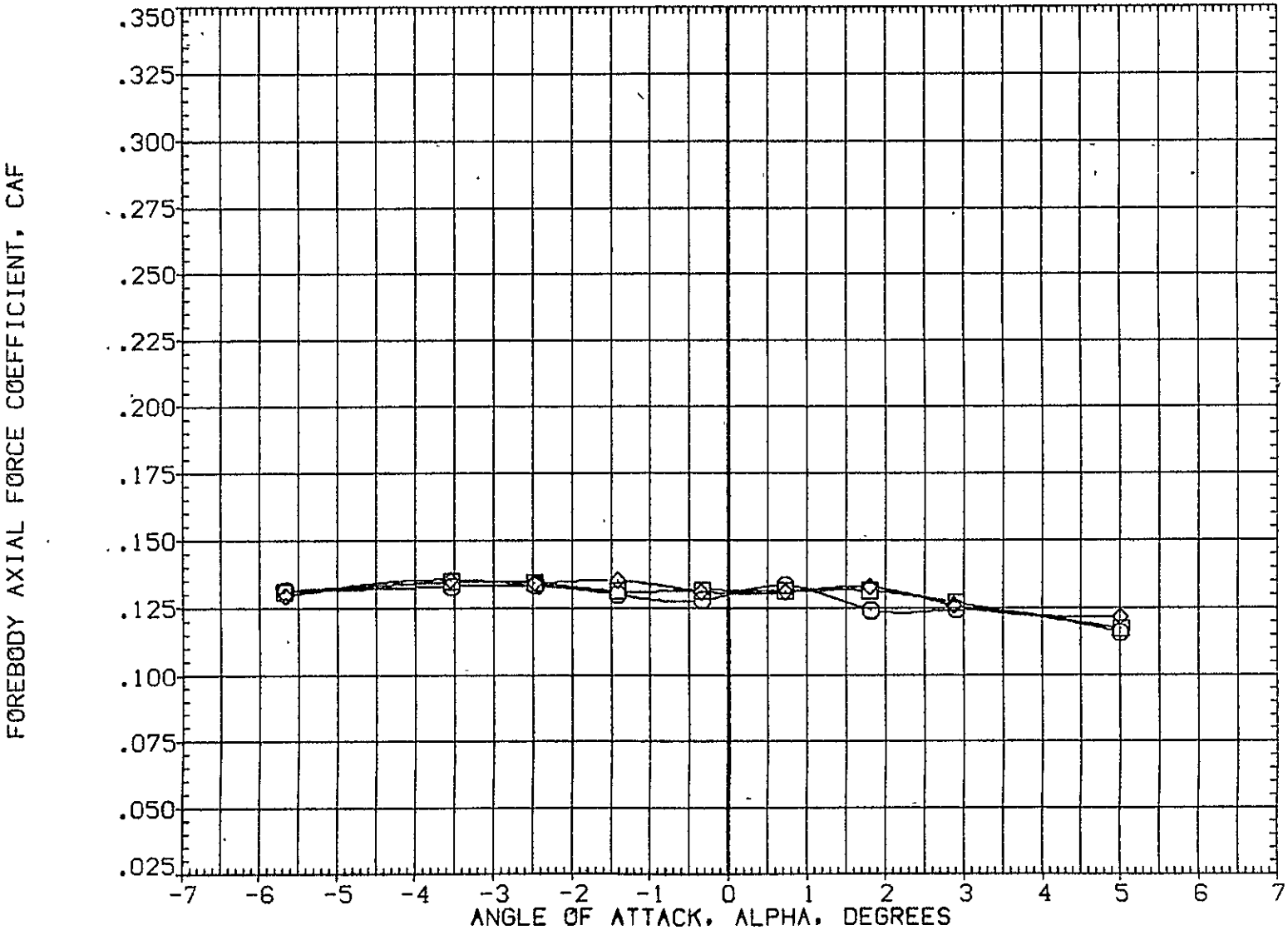


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



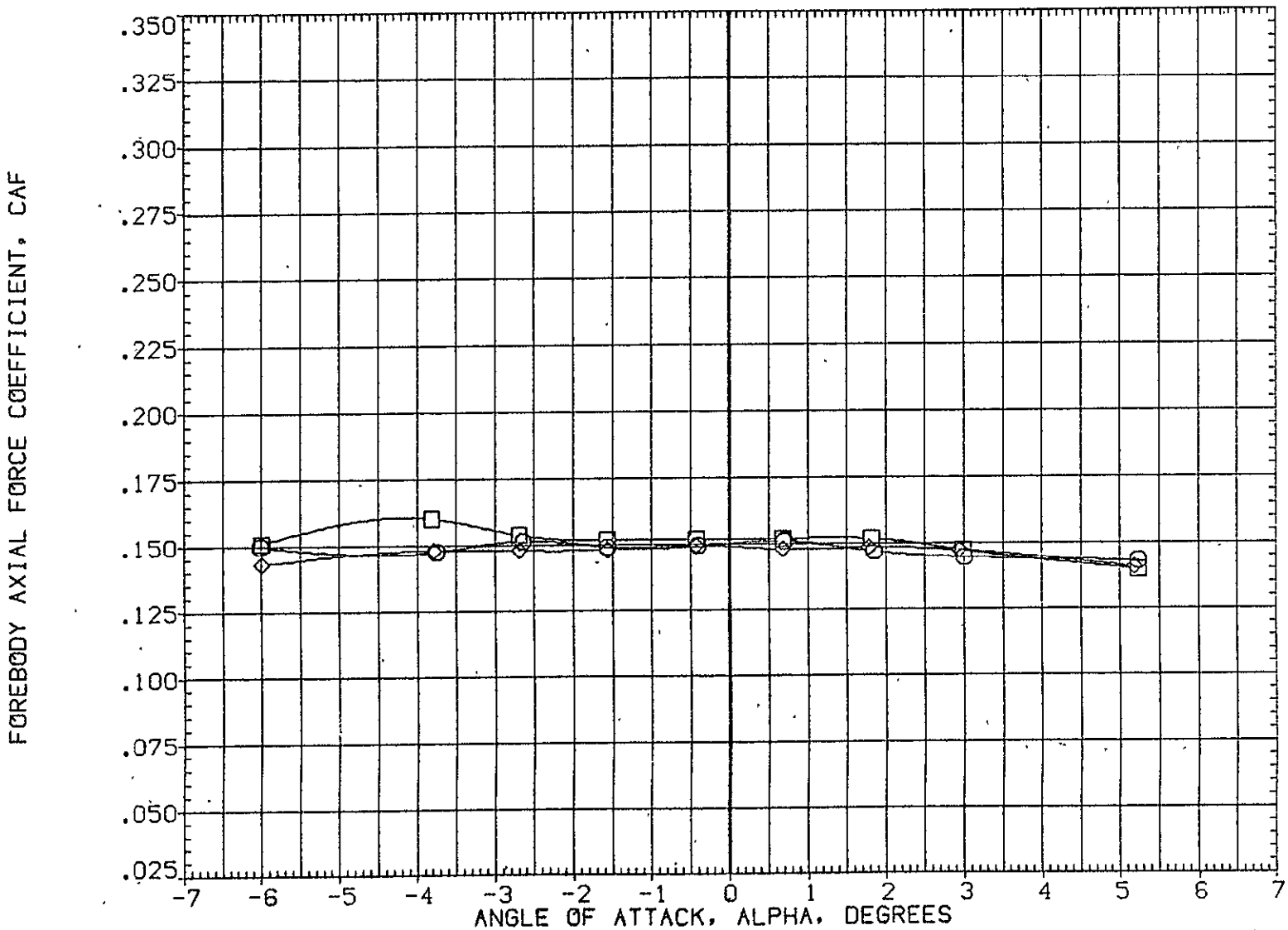
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHIS	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

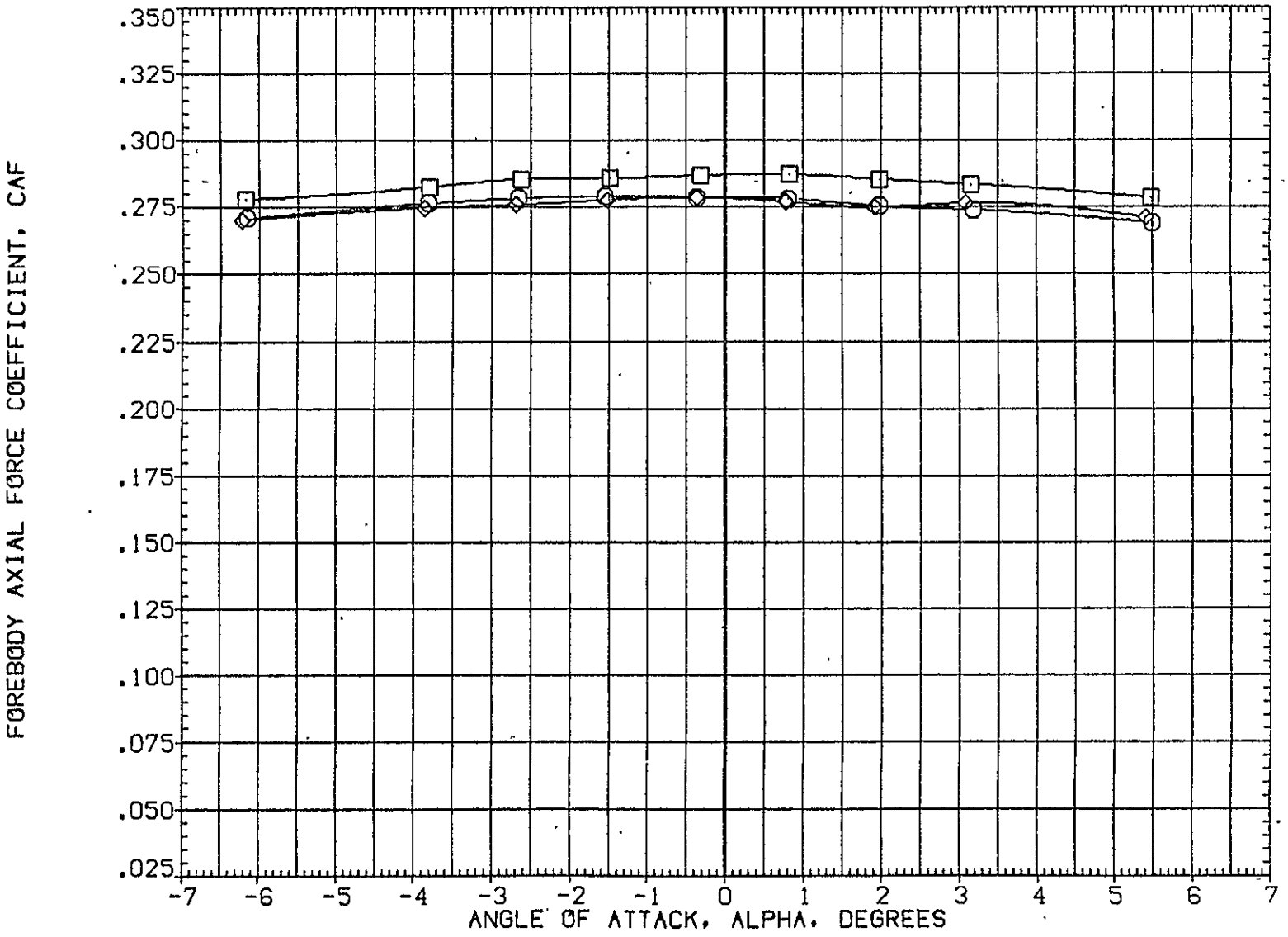


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

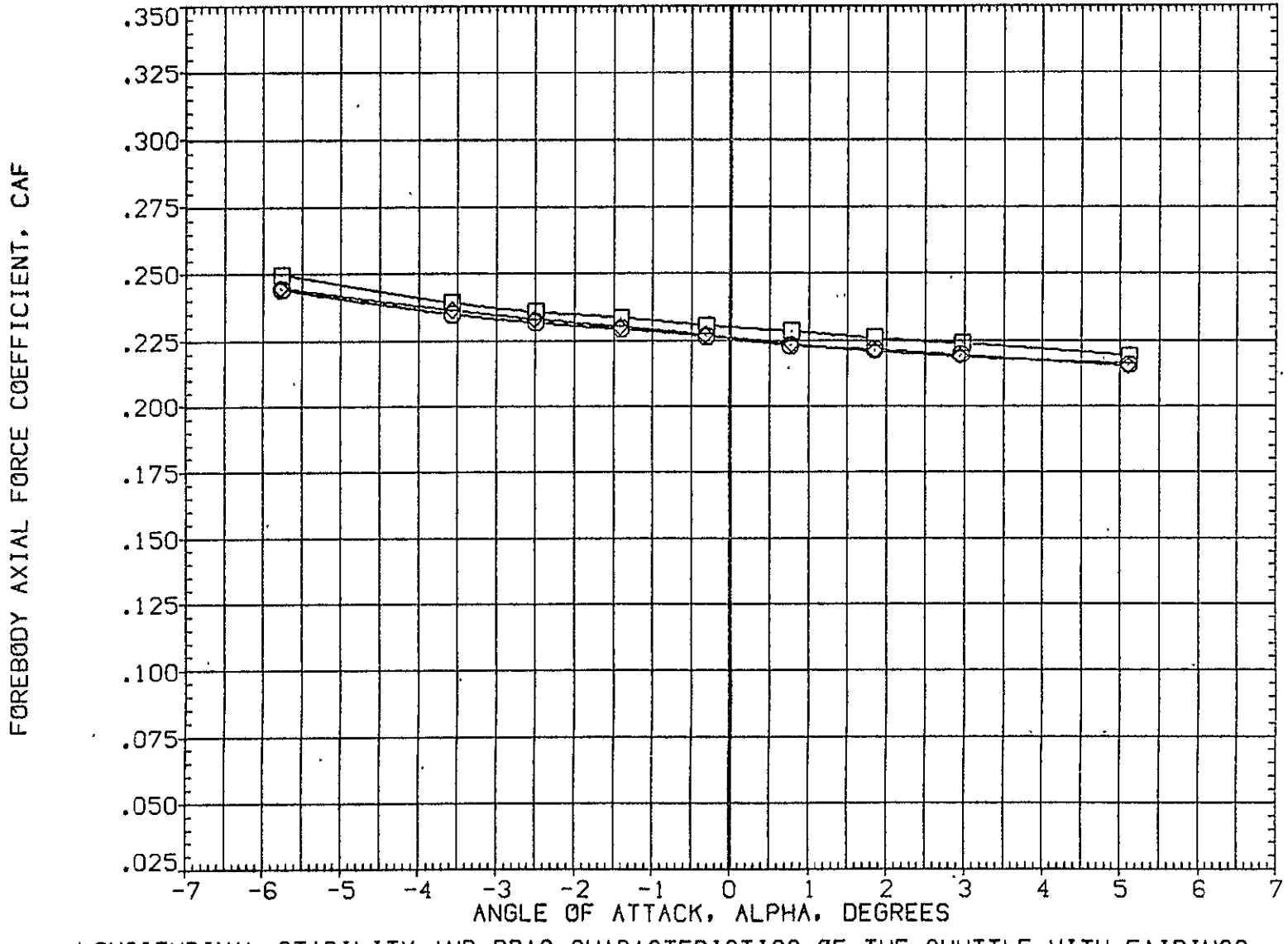


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

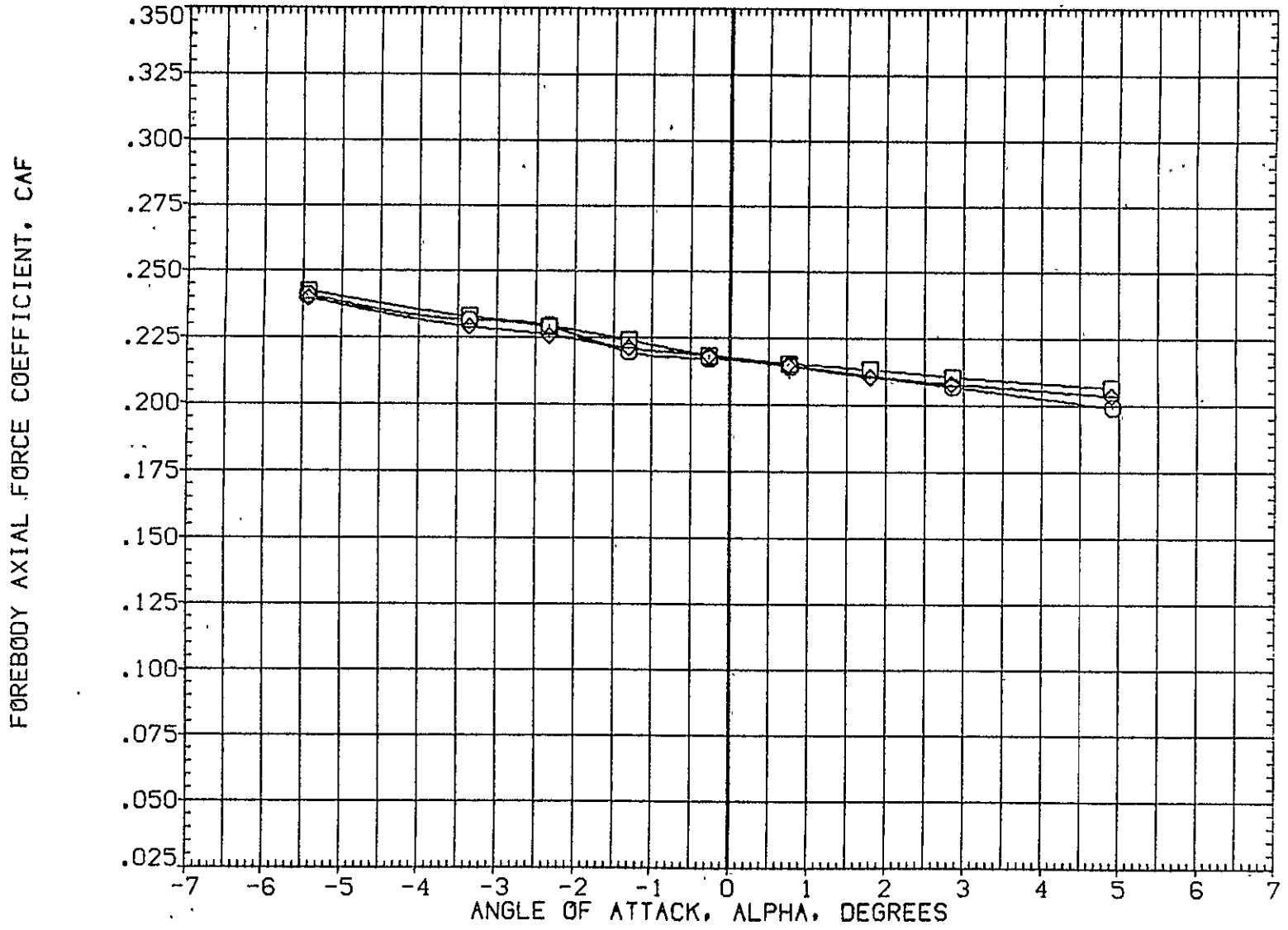


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(C1L004)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

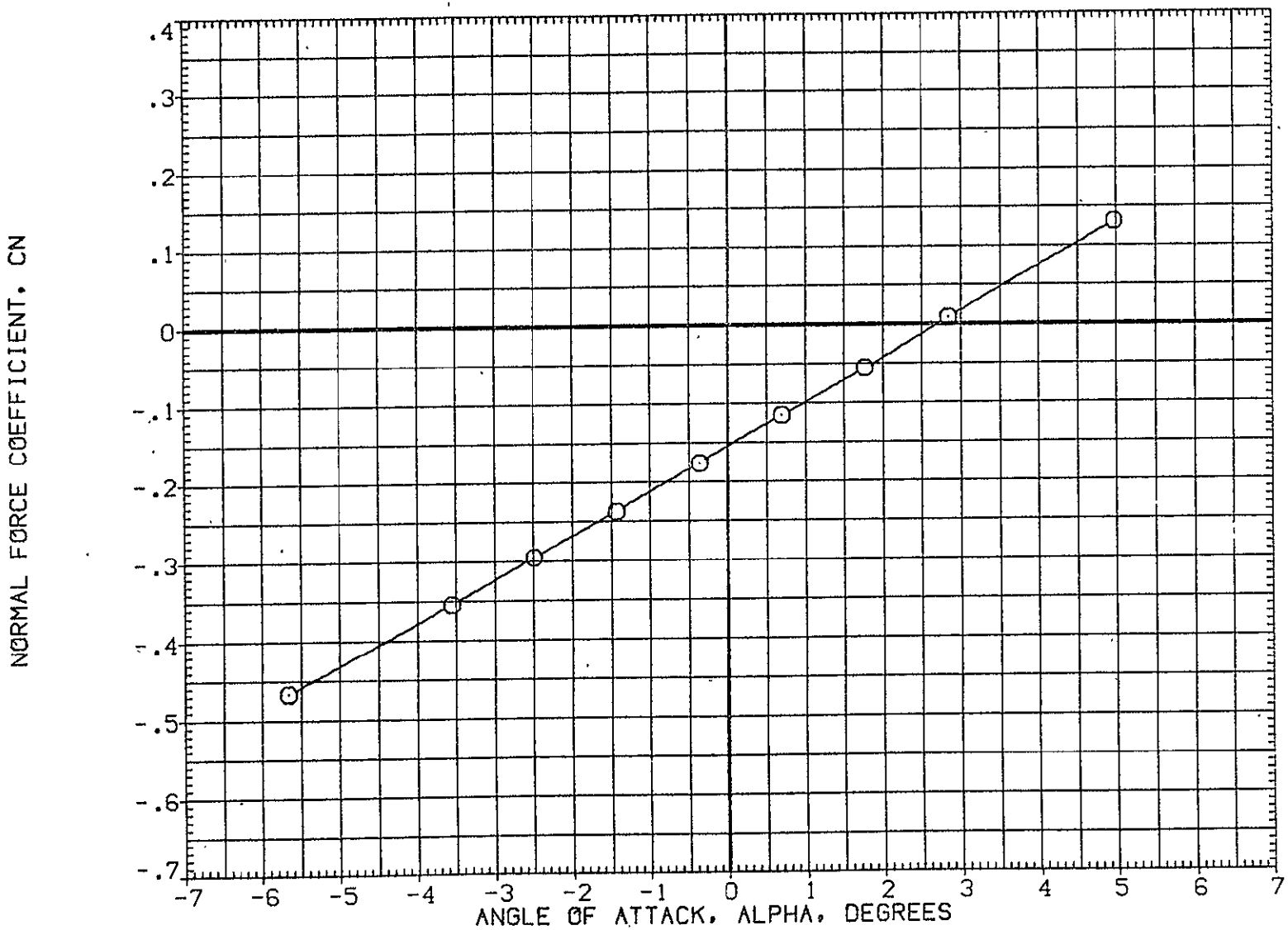
(E)MACH = 4.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	
(AILOO7)	▢	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7
(AILOO8)	▢	DATA NOT AVAILABLE	
(AILOO9)	◇	DATA NOT AVAILABLE	

BETA	ORBINC	PHI-S	Z
.000	.000	90.000	.140
.000	.000	90.000	.140
.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

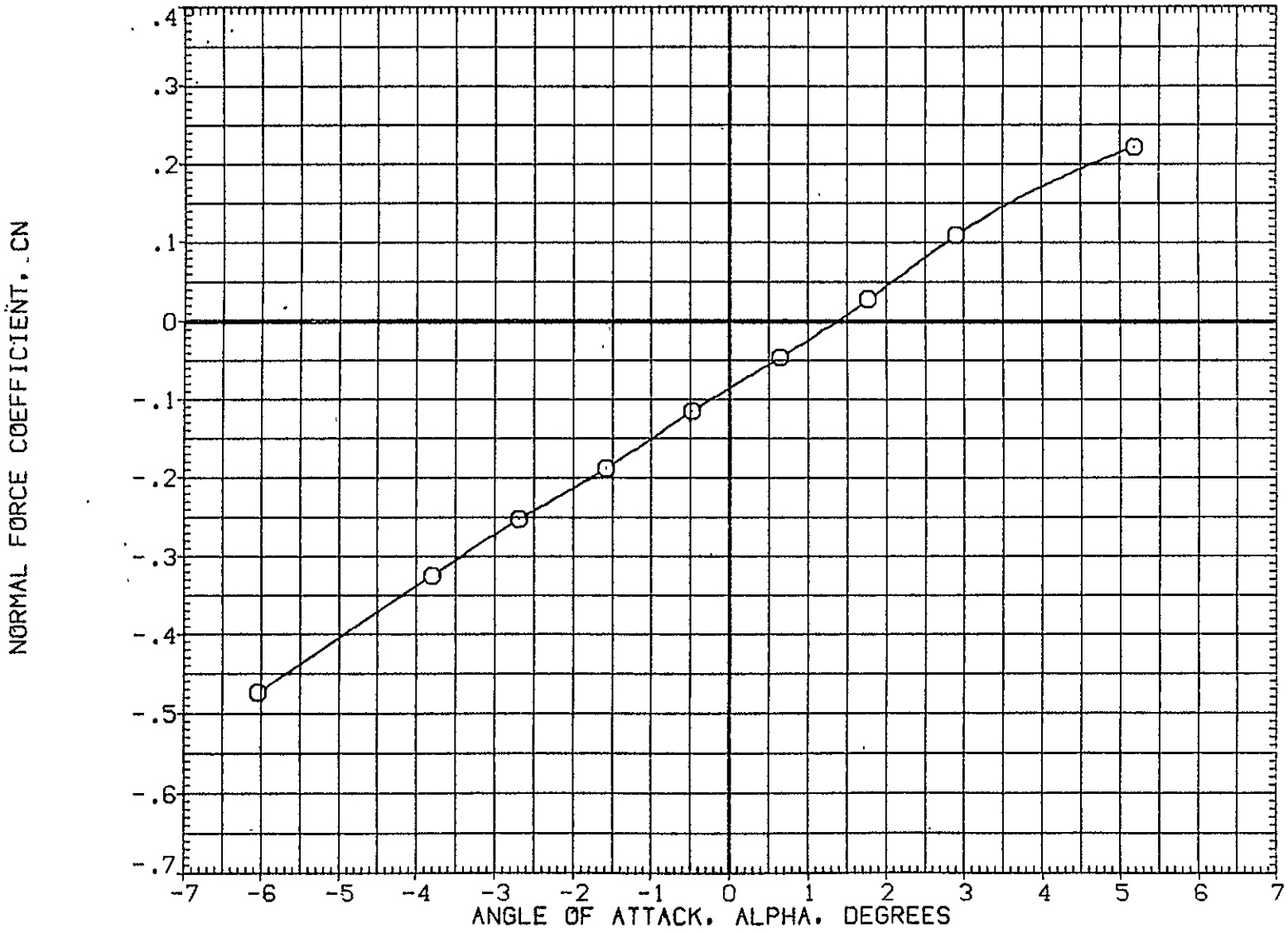


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILOO7)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(AILOO8)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILOO9)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

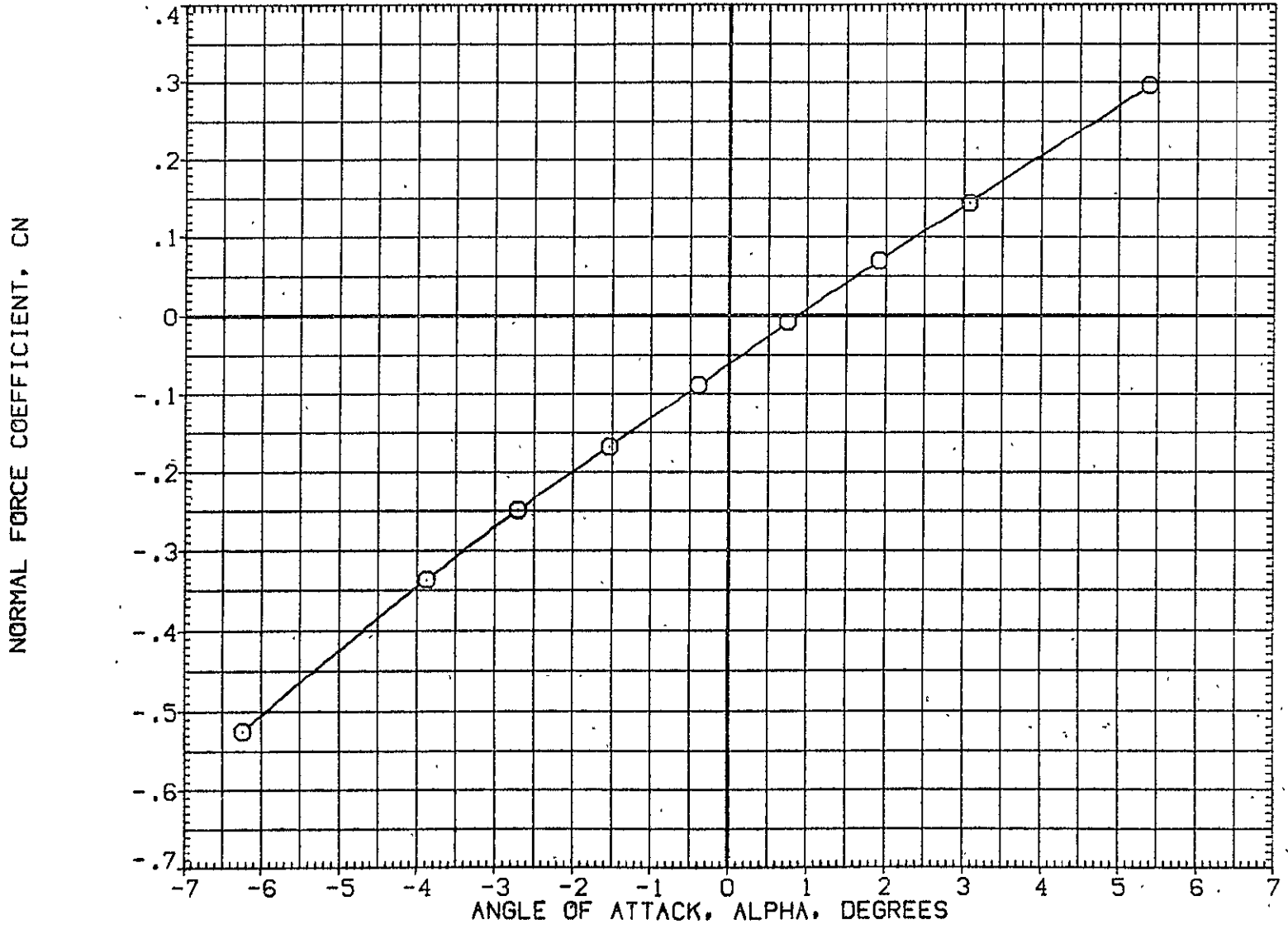


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(AIL008)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AIL009)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

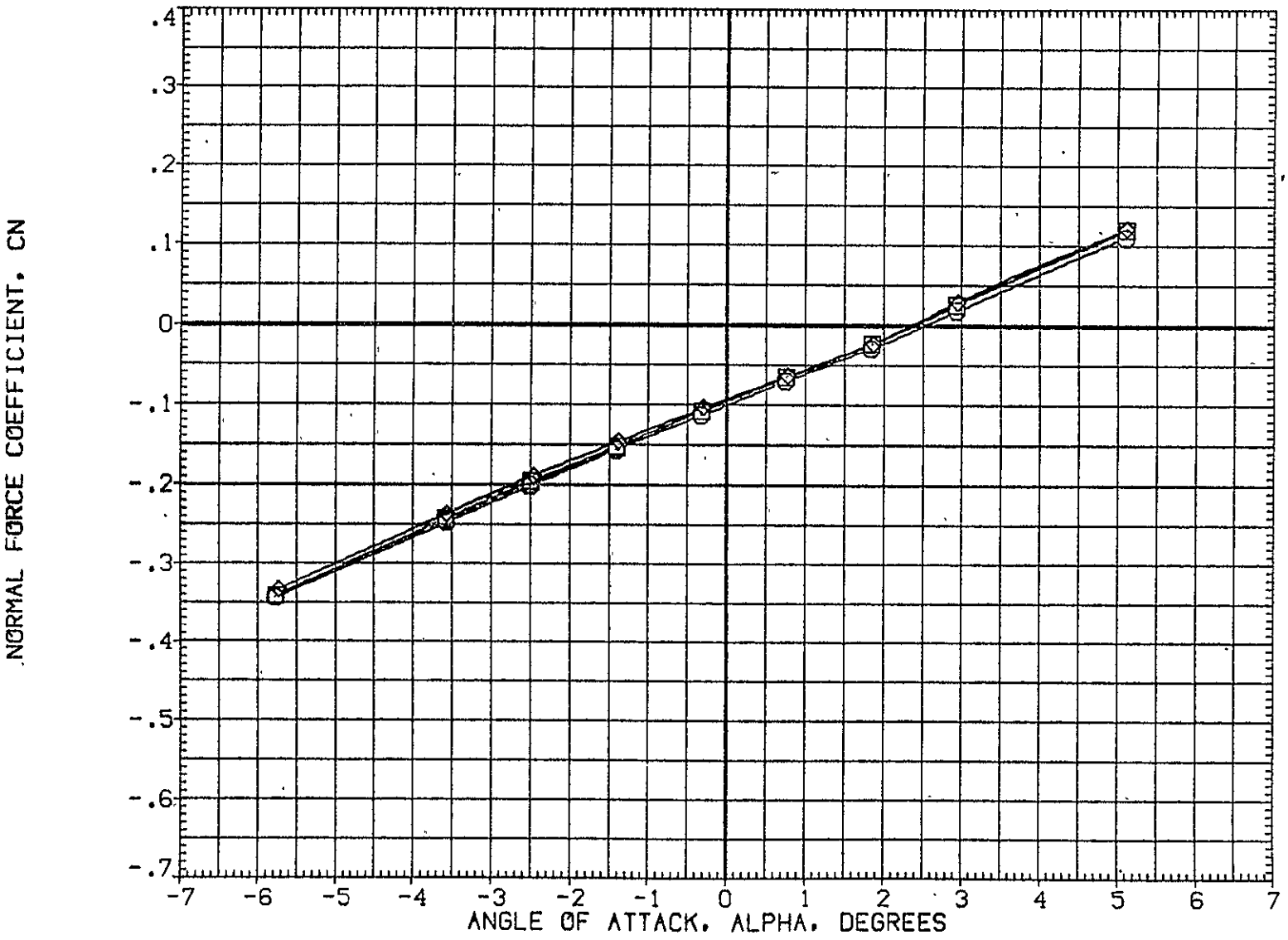


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

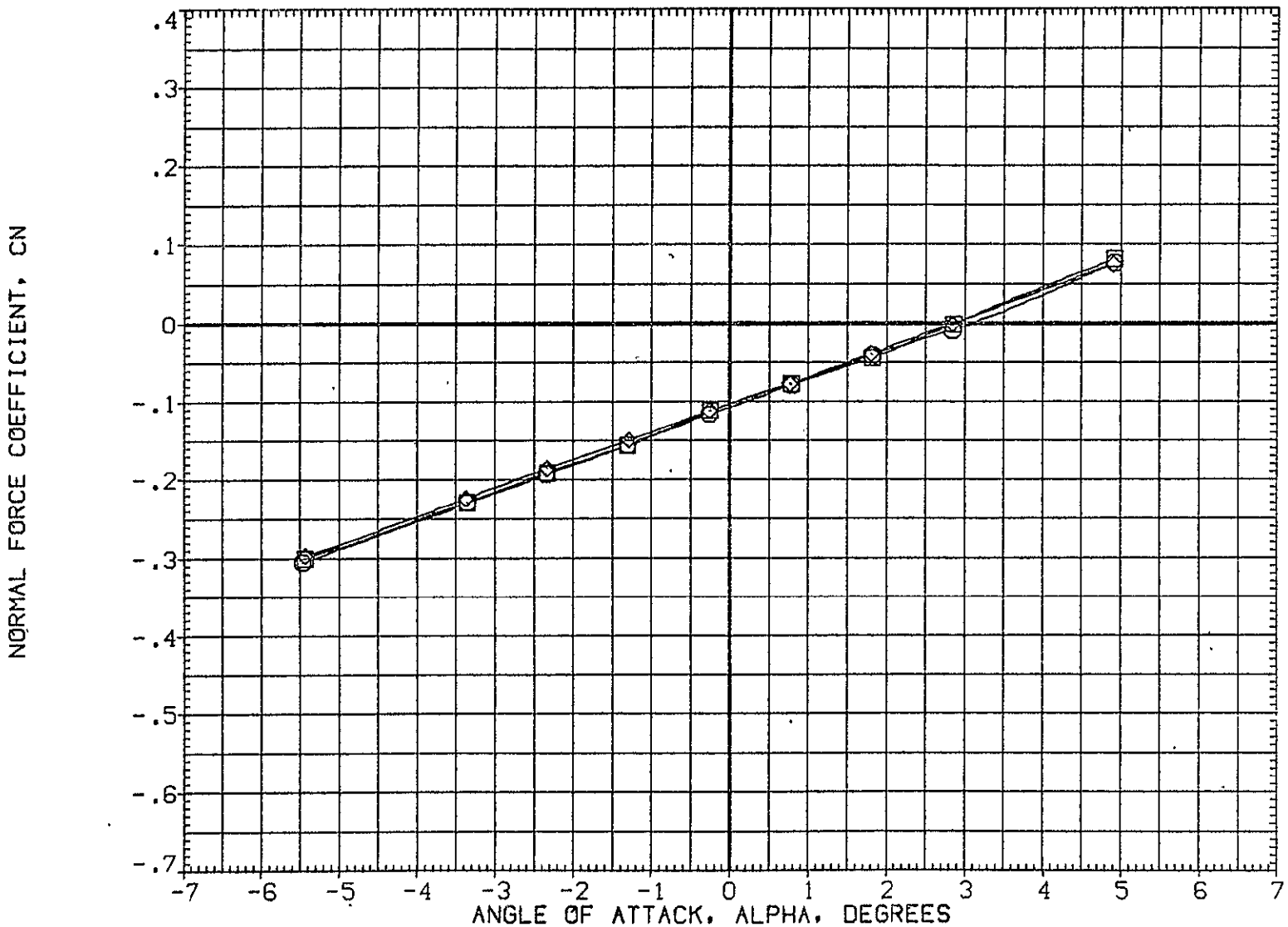


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

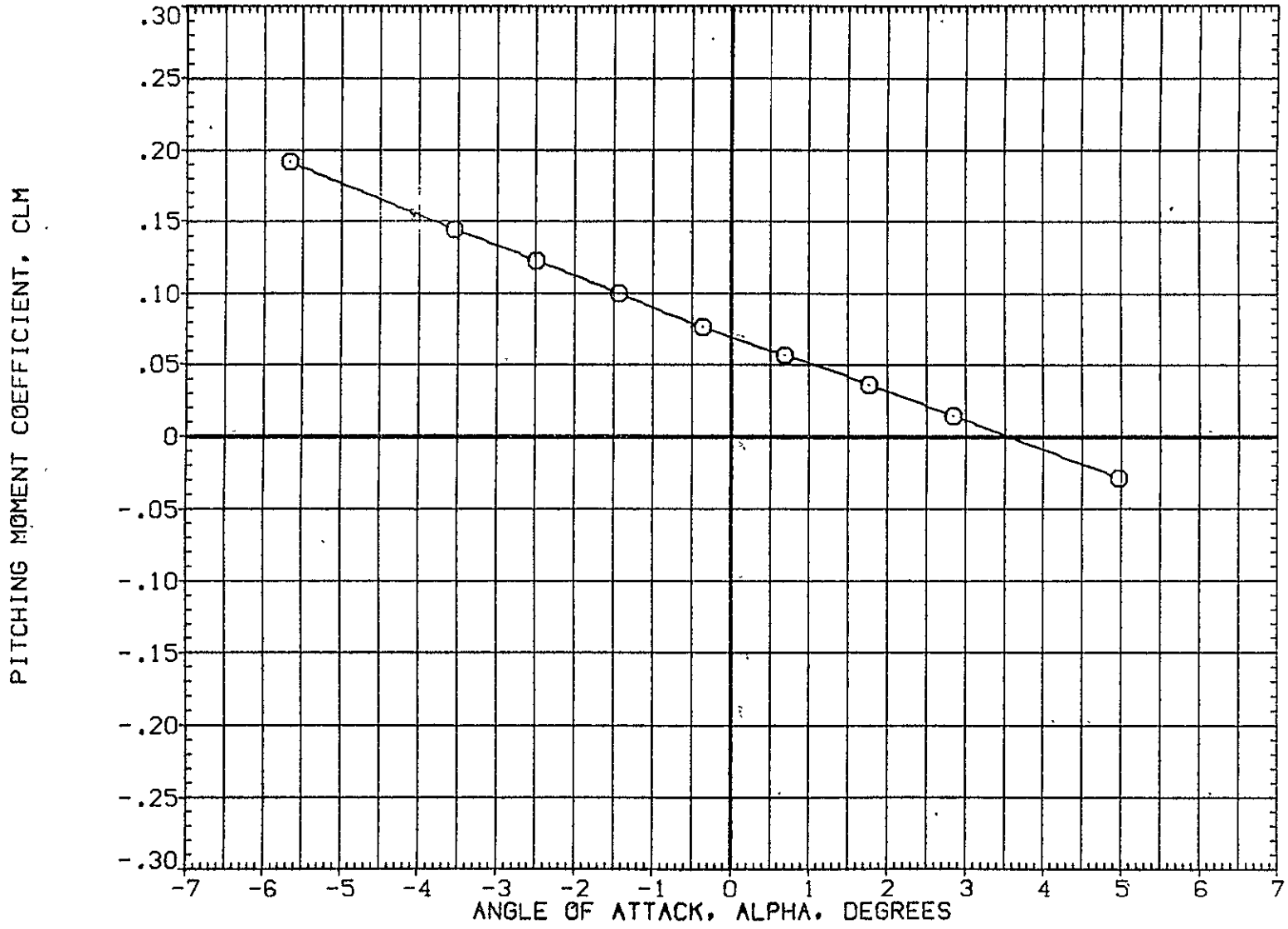


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008) □	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009) ◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILOO7)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(AILOO8)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILOO9)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

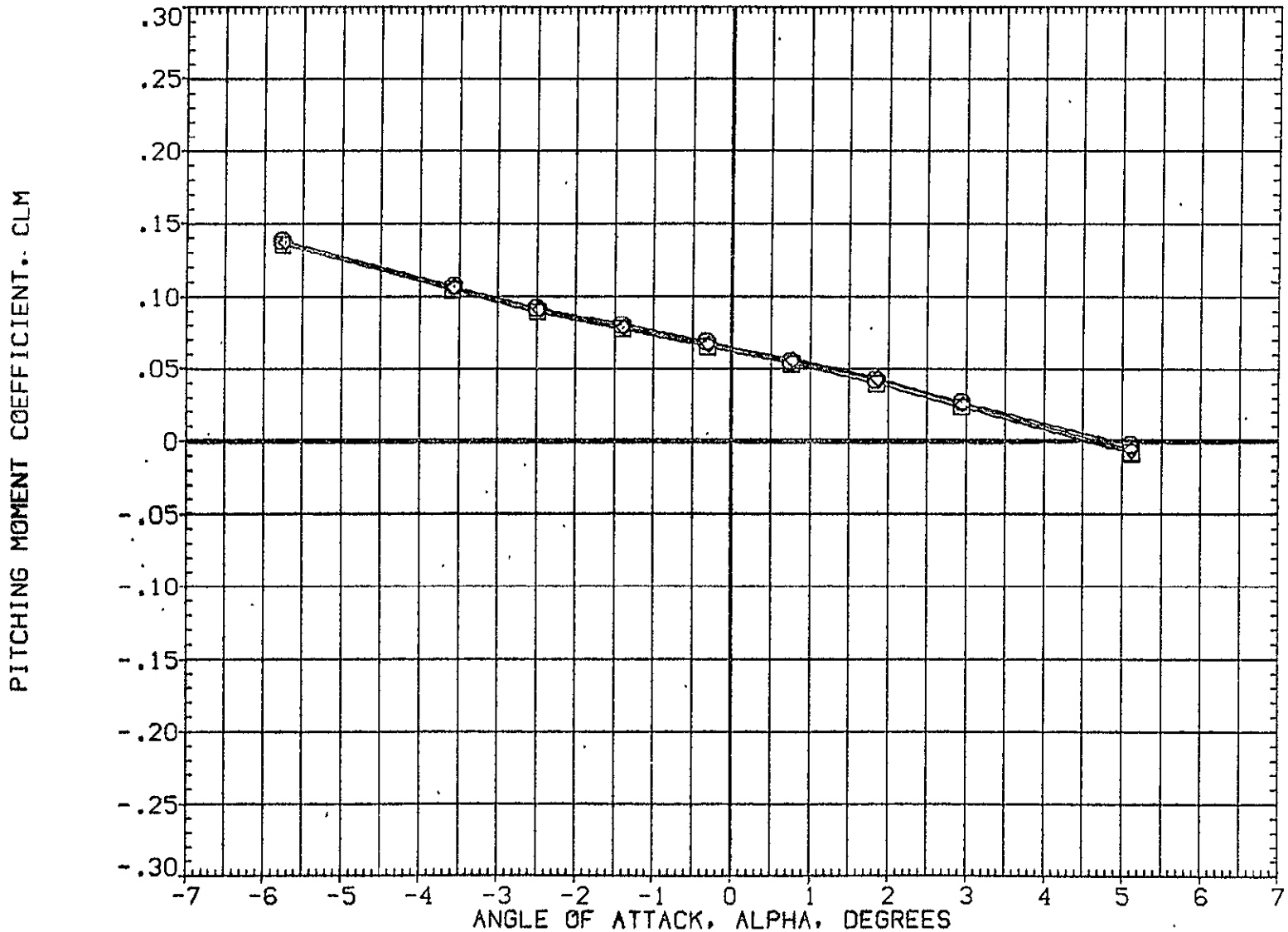


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	▢	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	▢	MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

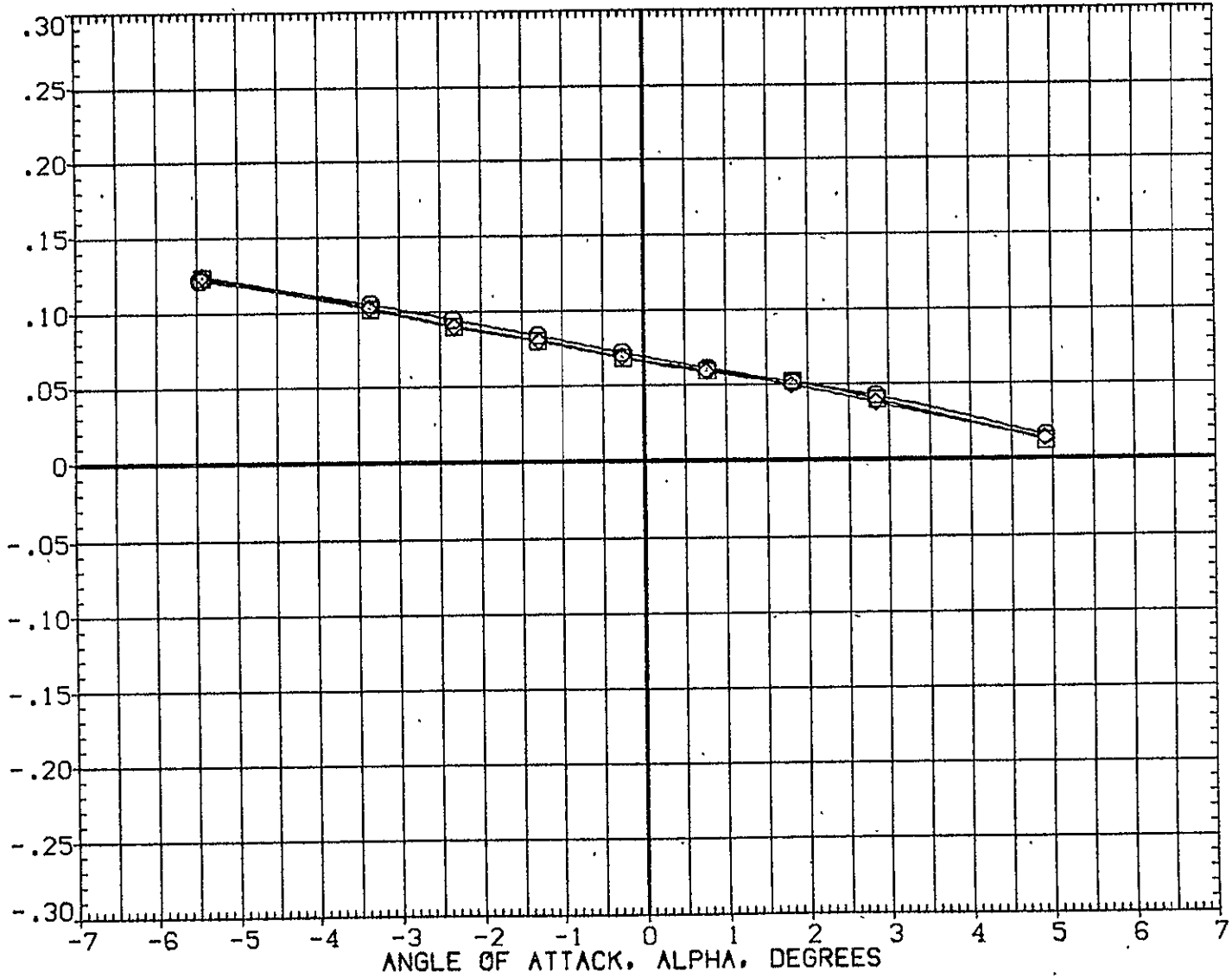


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

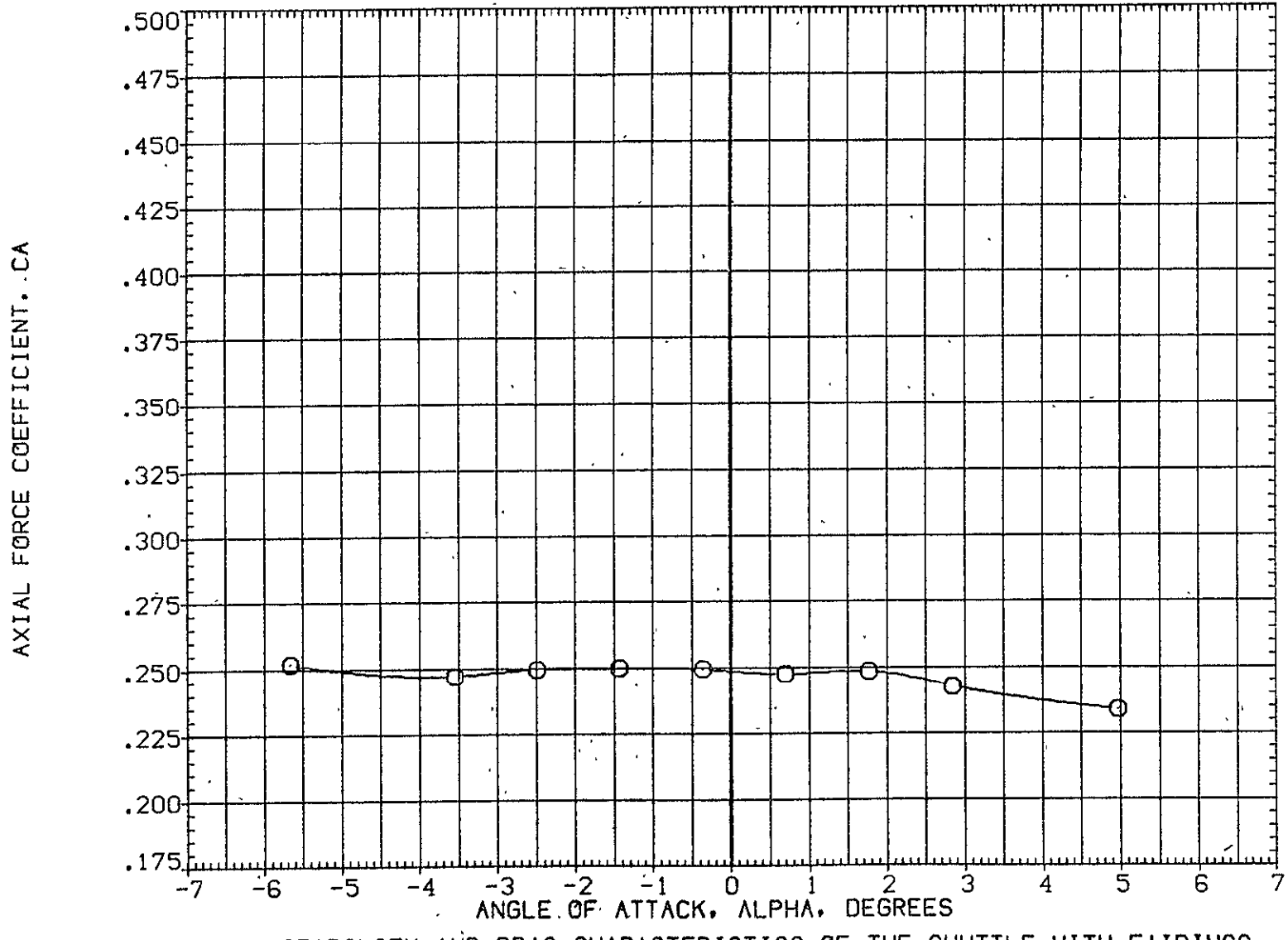


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

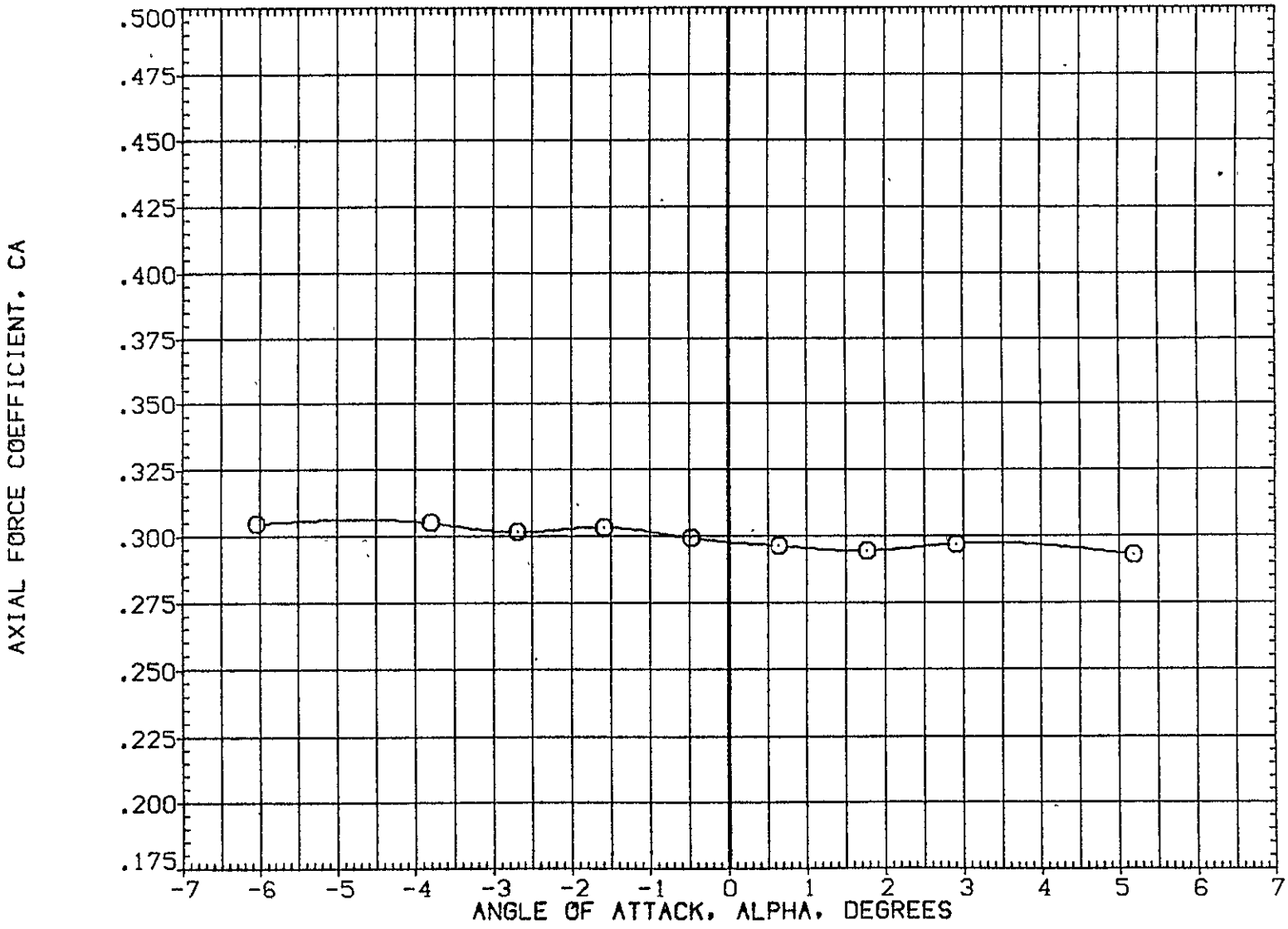


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

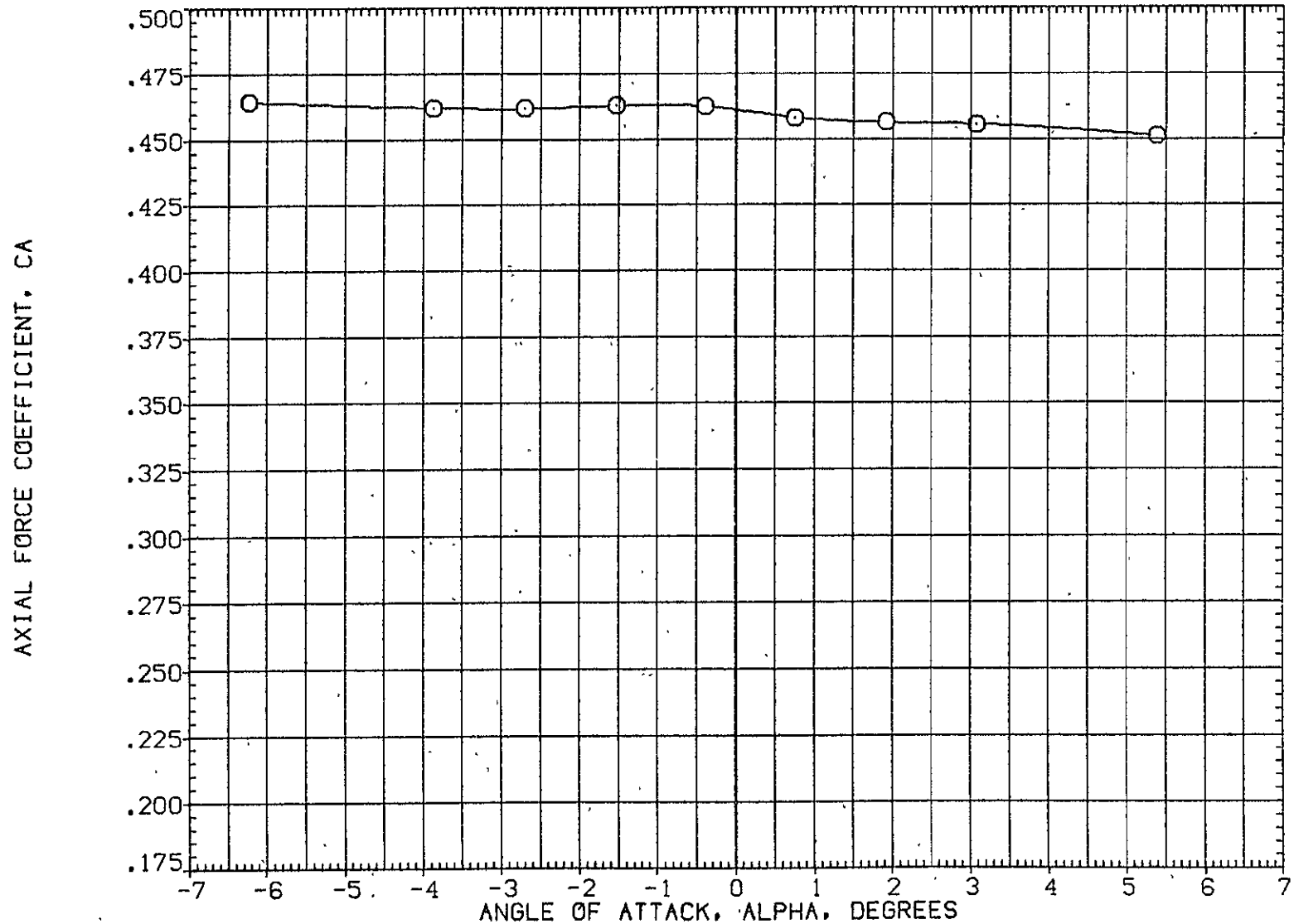


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

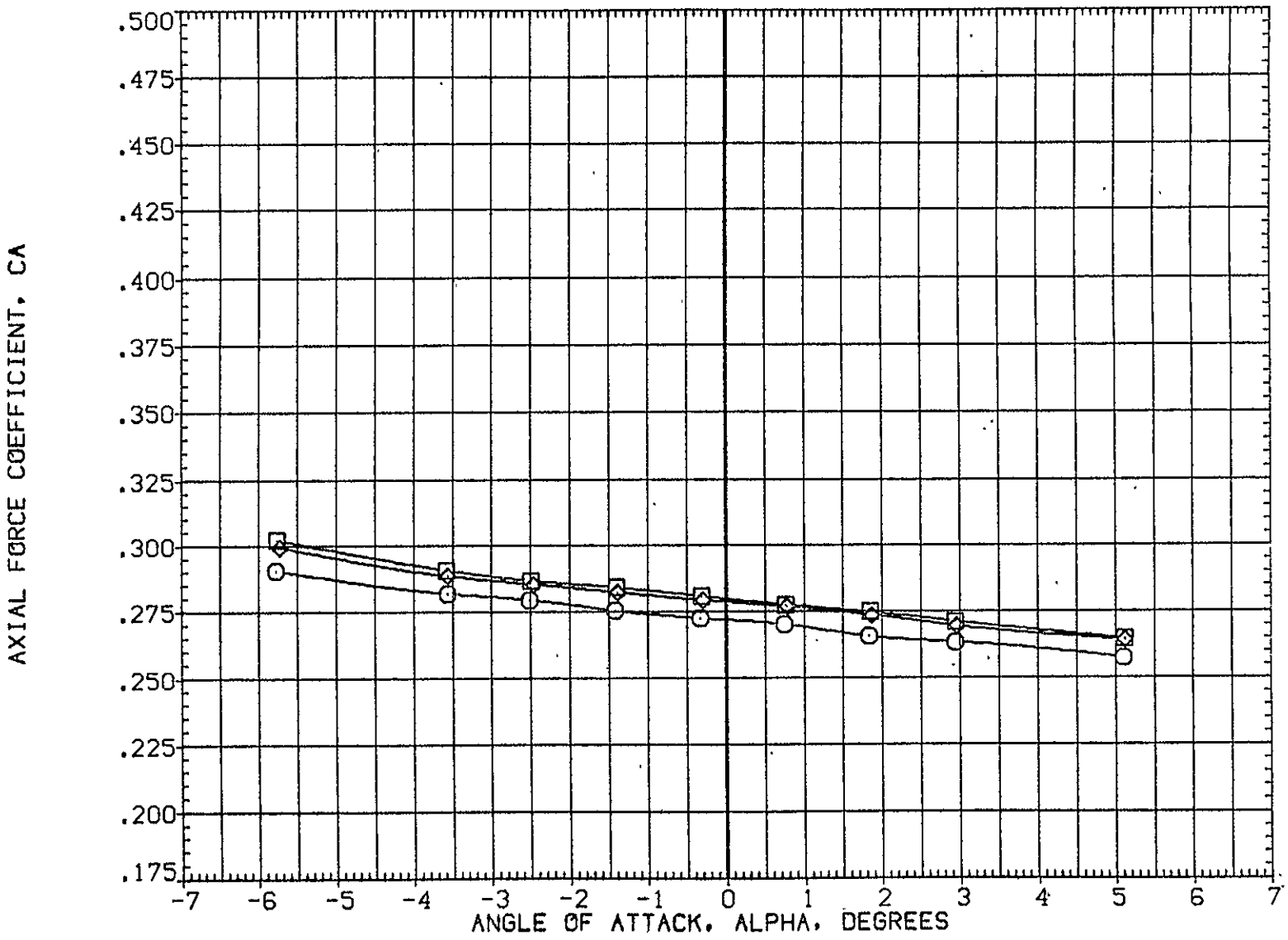


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



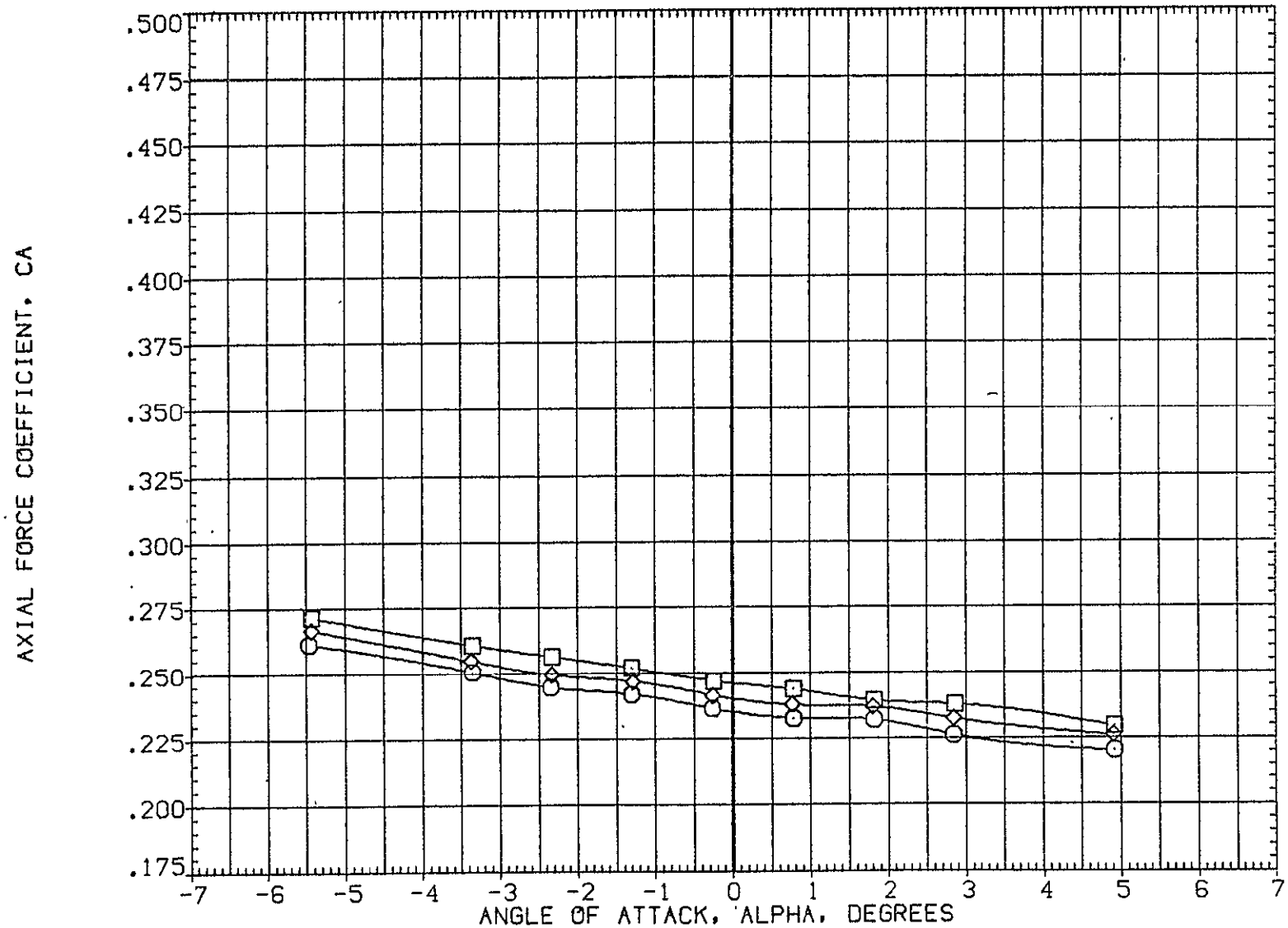
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

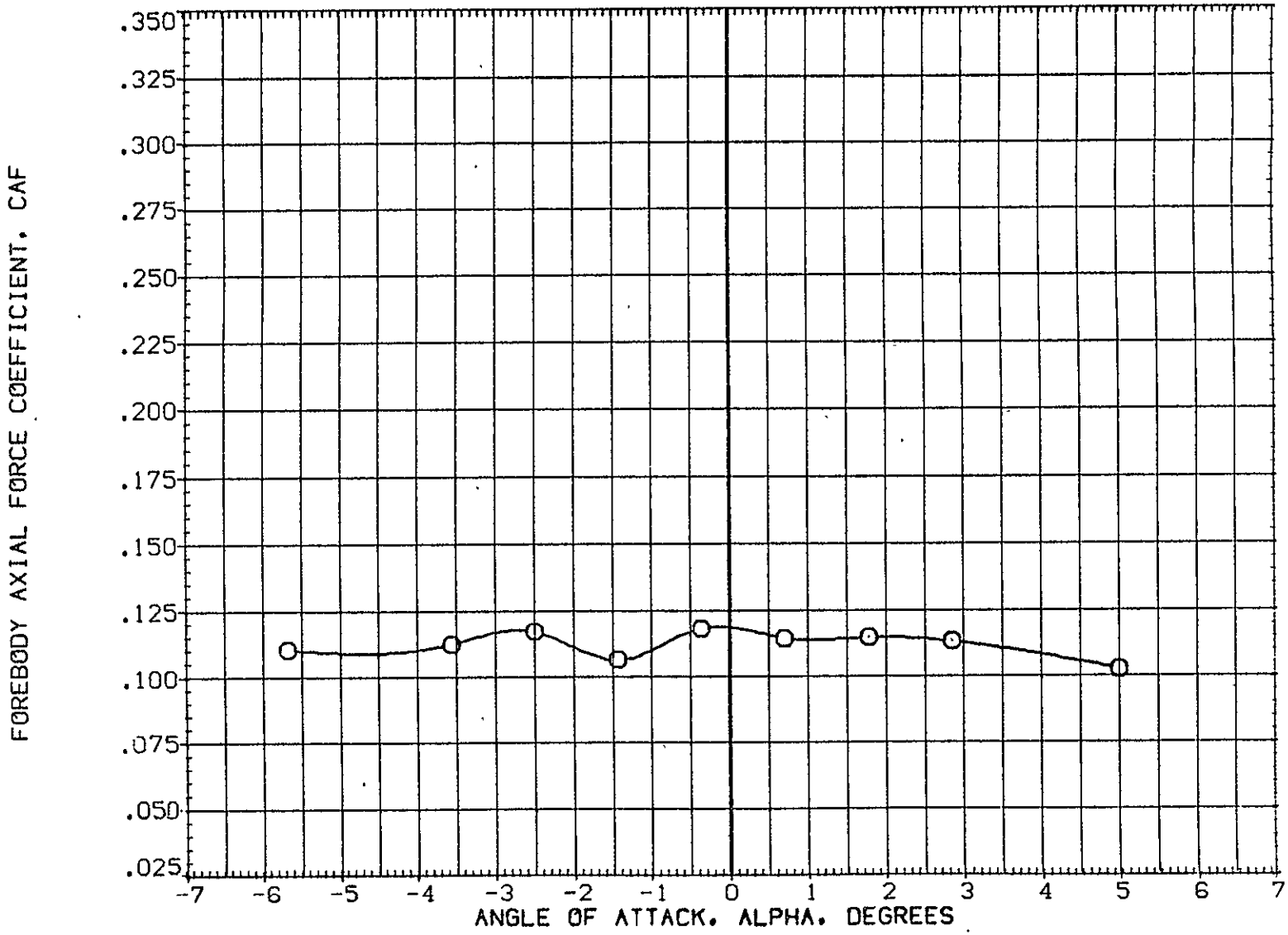


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	⬭	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	⬭	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	



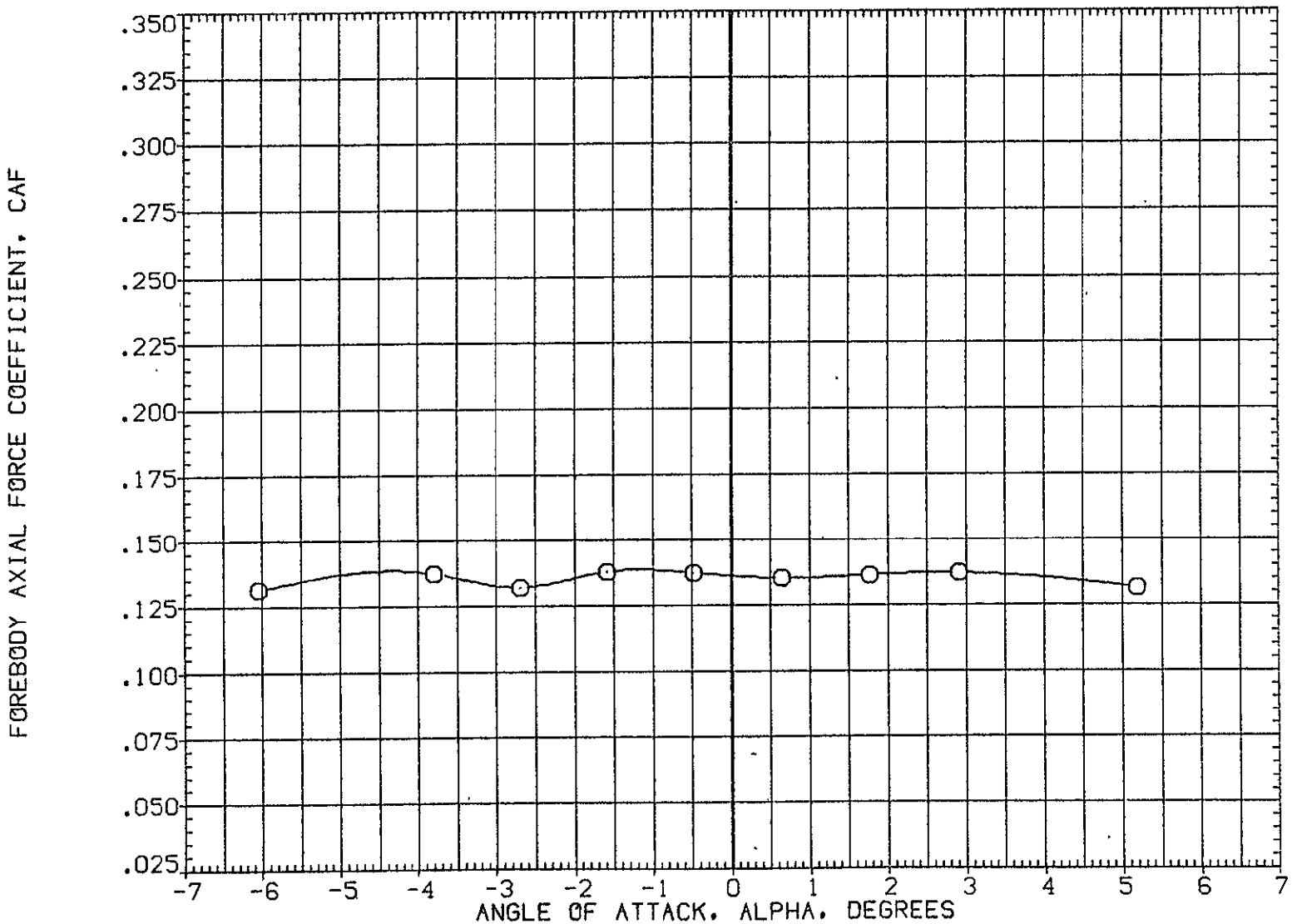
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

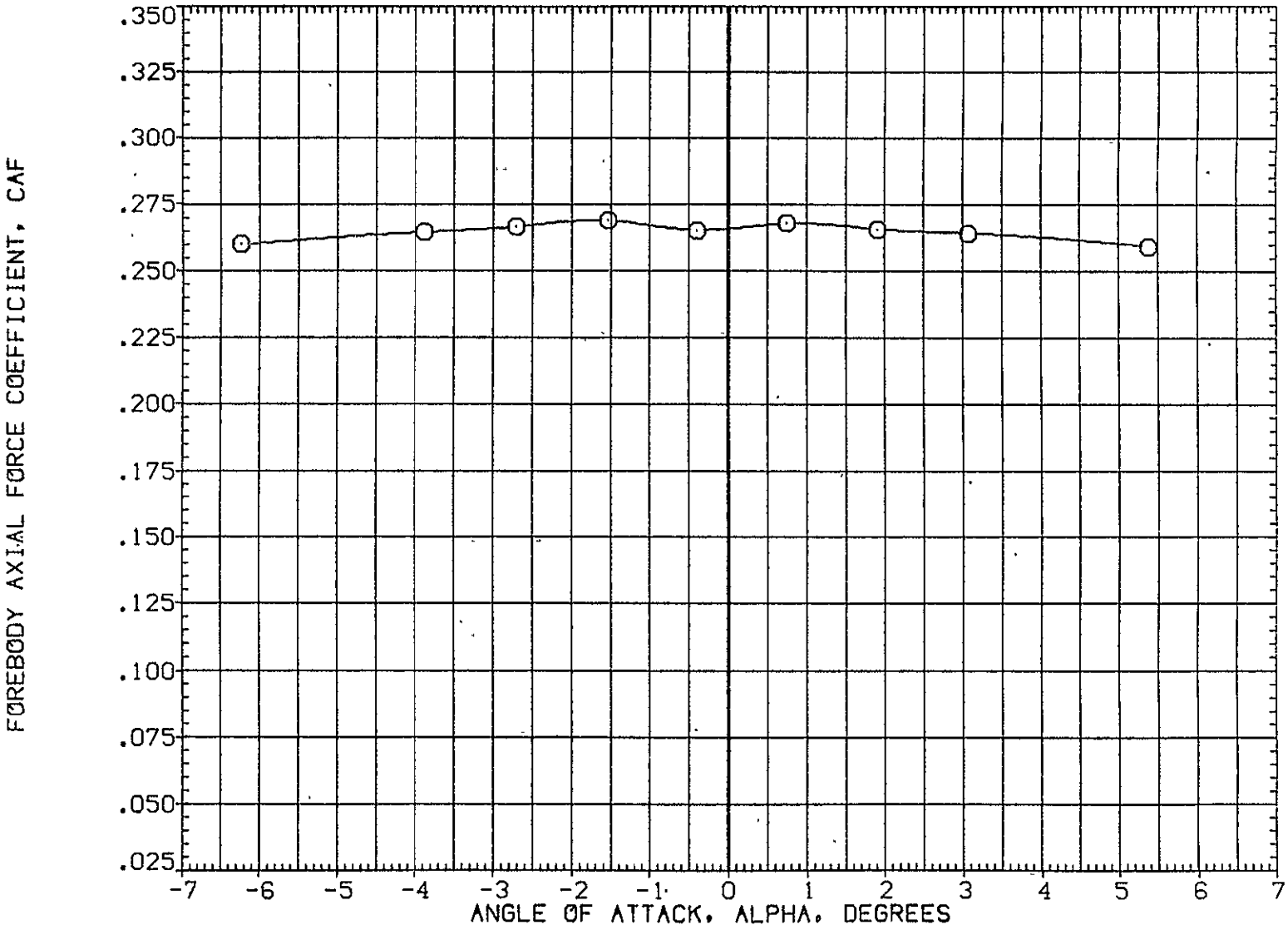


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L007)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(A1L008)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

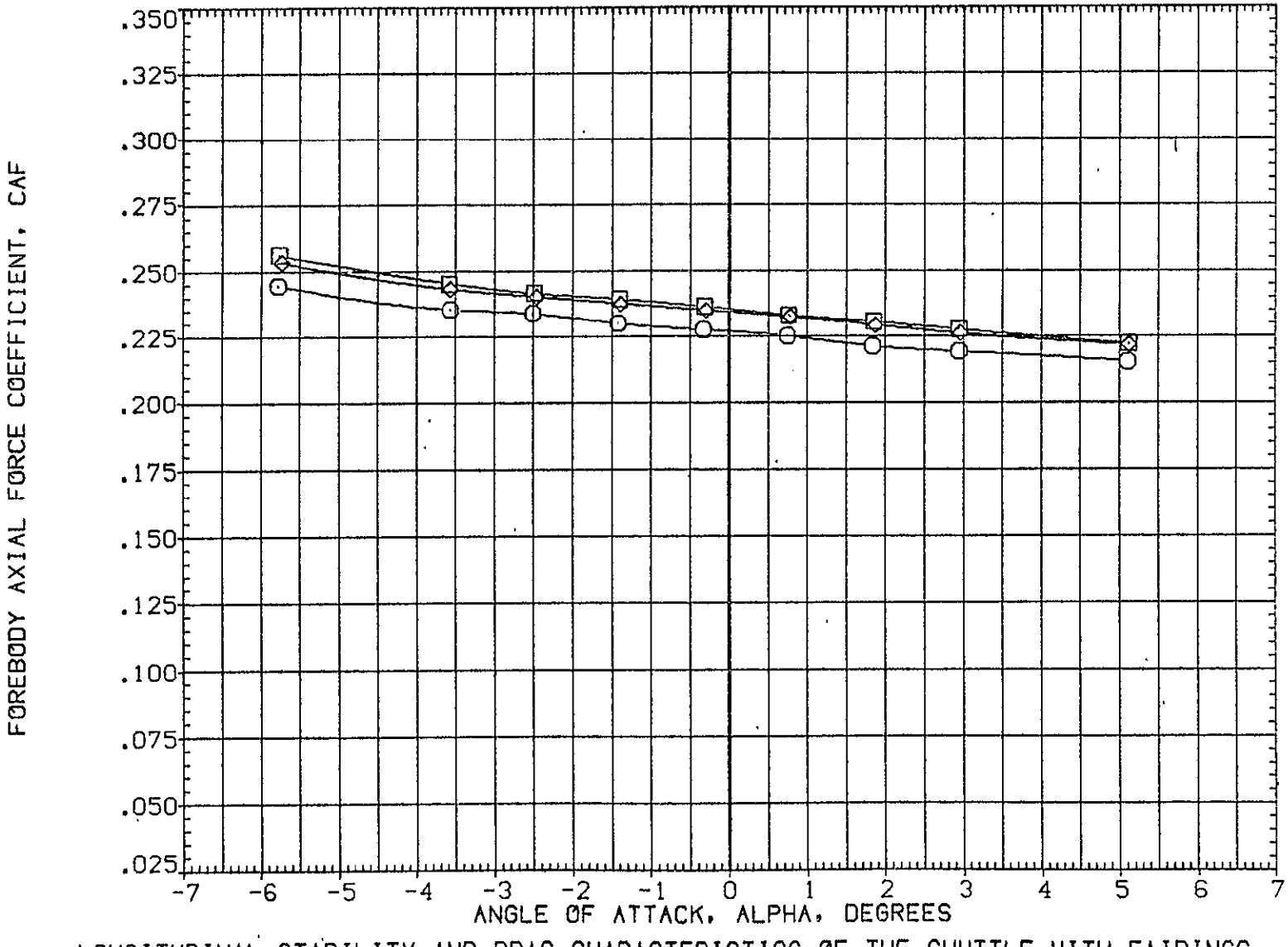


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL007)	○	MSFC TWT 600 (FAI4)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(AIL008)	□	MSFC TWT 600 (FAI4)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(AIL009)	◇	MSFC TWT 600 (FAI4)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

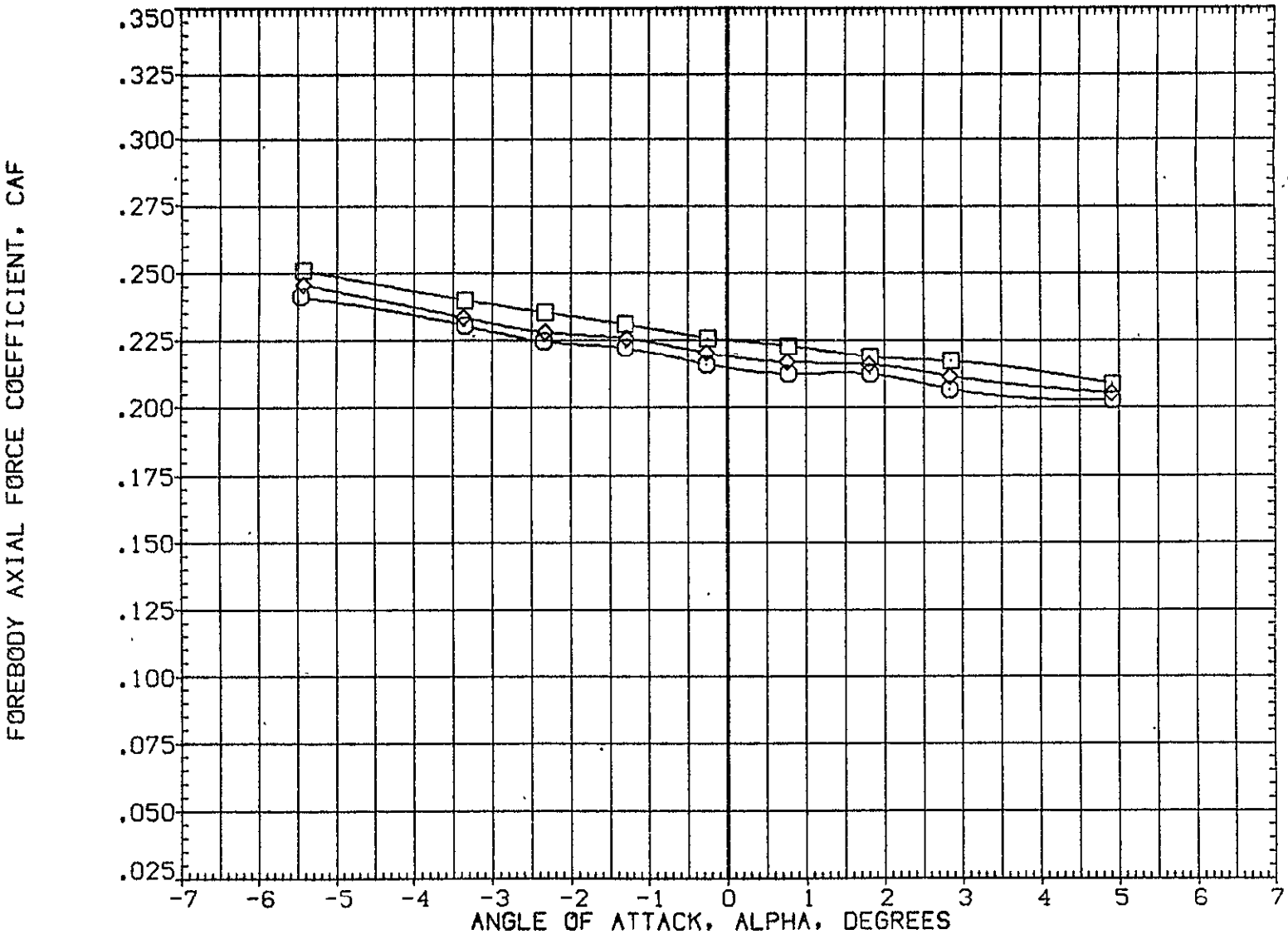


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILOO7)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140
(AILOO8)	⊡	MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(AILOO9)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

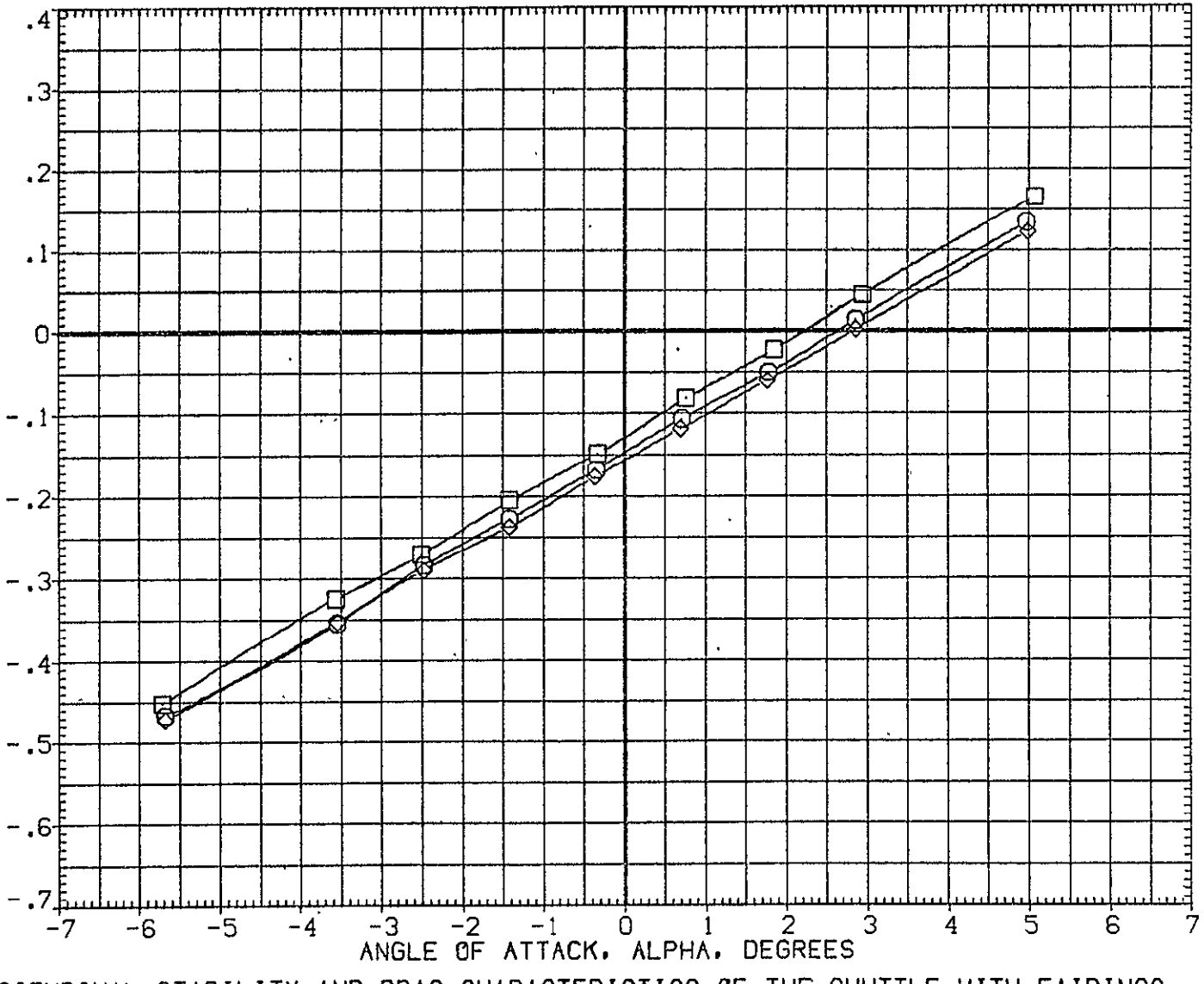


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

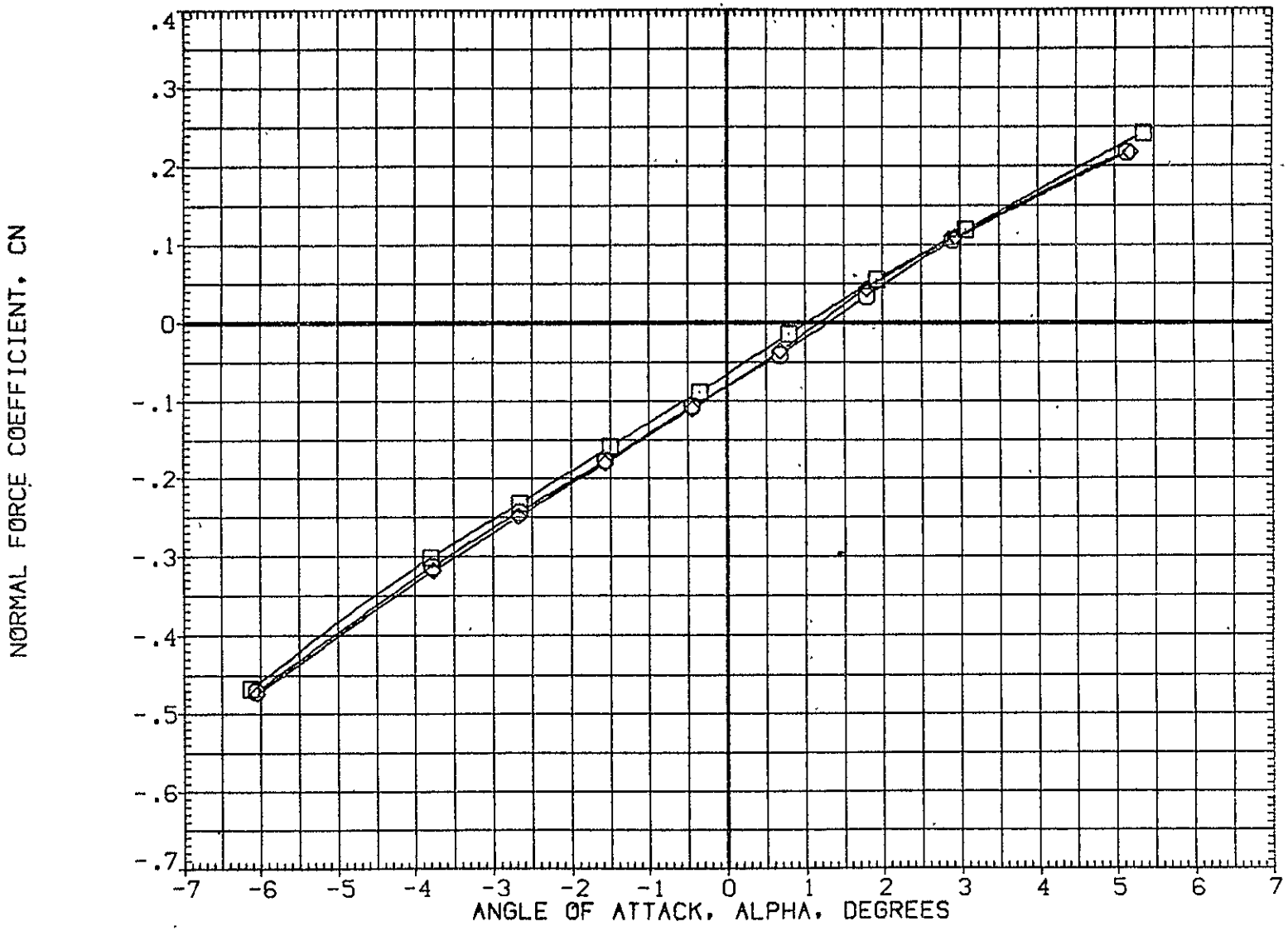


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)	○	MSFC TWT 600 (FA14)	0ITISIAIRIKIF10	.000	.000	90.000	.140
(AILO11)	□	MSFC TWT 600 (FA14)	0ITISIAIRIKIF11	.000	.000	90.000	.140
(AILO12)	◇	MSFC TWT 600 (FA14)	0ITISIAIRIKIF12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

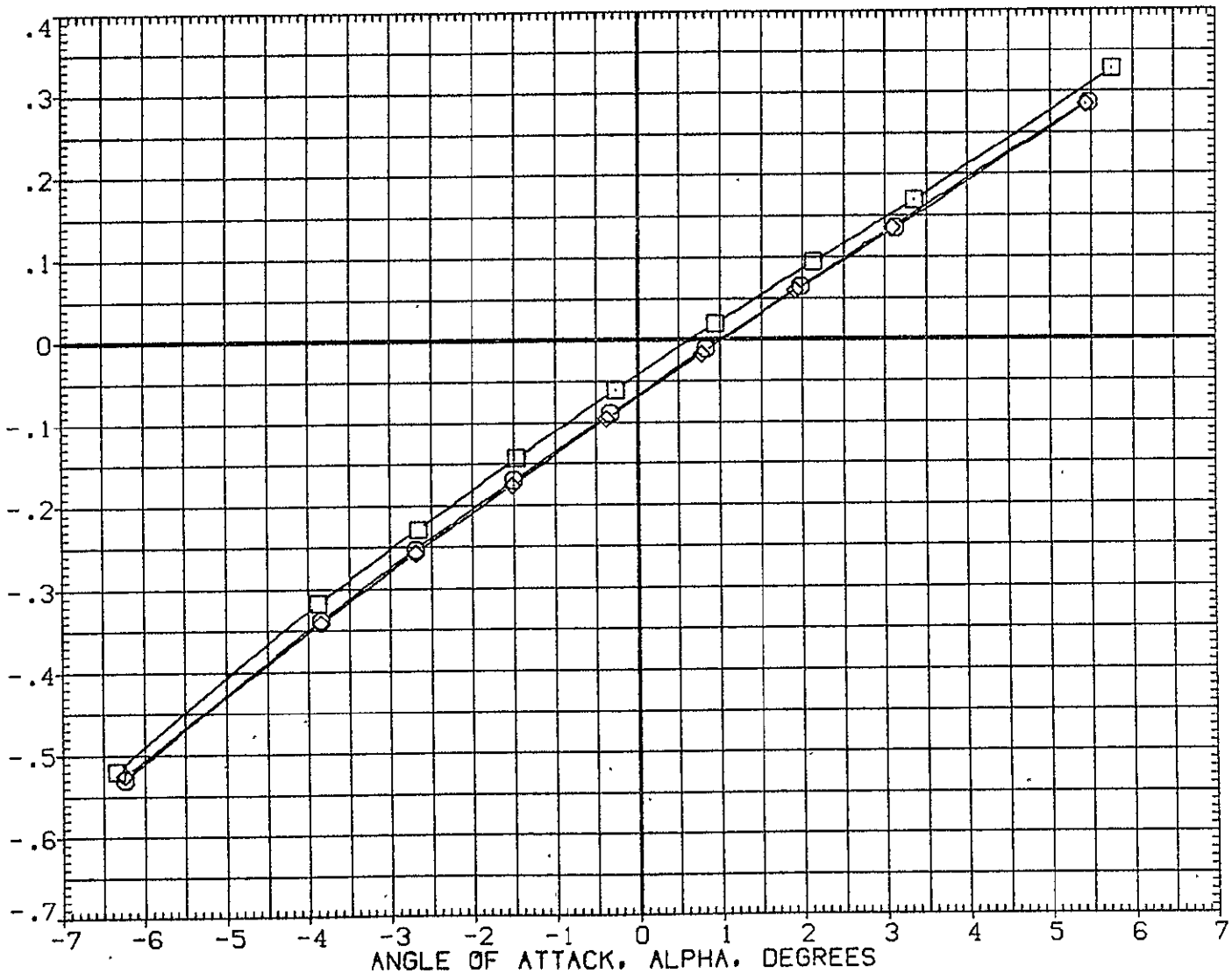


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)		MSFC TWT 600 (FA14)	01TIS1A1R1K1F10	.000	.000	90.000	.140
(AILO11)		MSFC TWT 600 (FA14)	01TIS1A1R1K1F11	.000	.000	90.000.	.140
(AILO12)		MSFC TWT 600 (FA14)	01TIS1A1R1K1F12 .	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

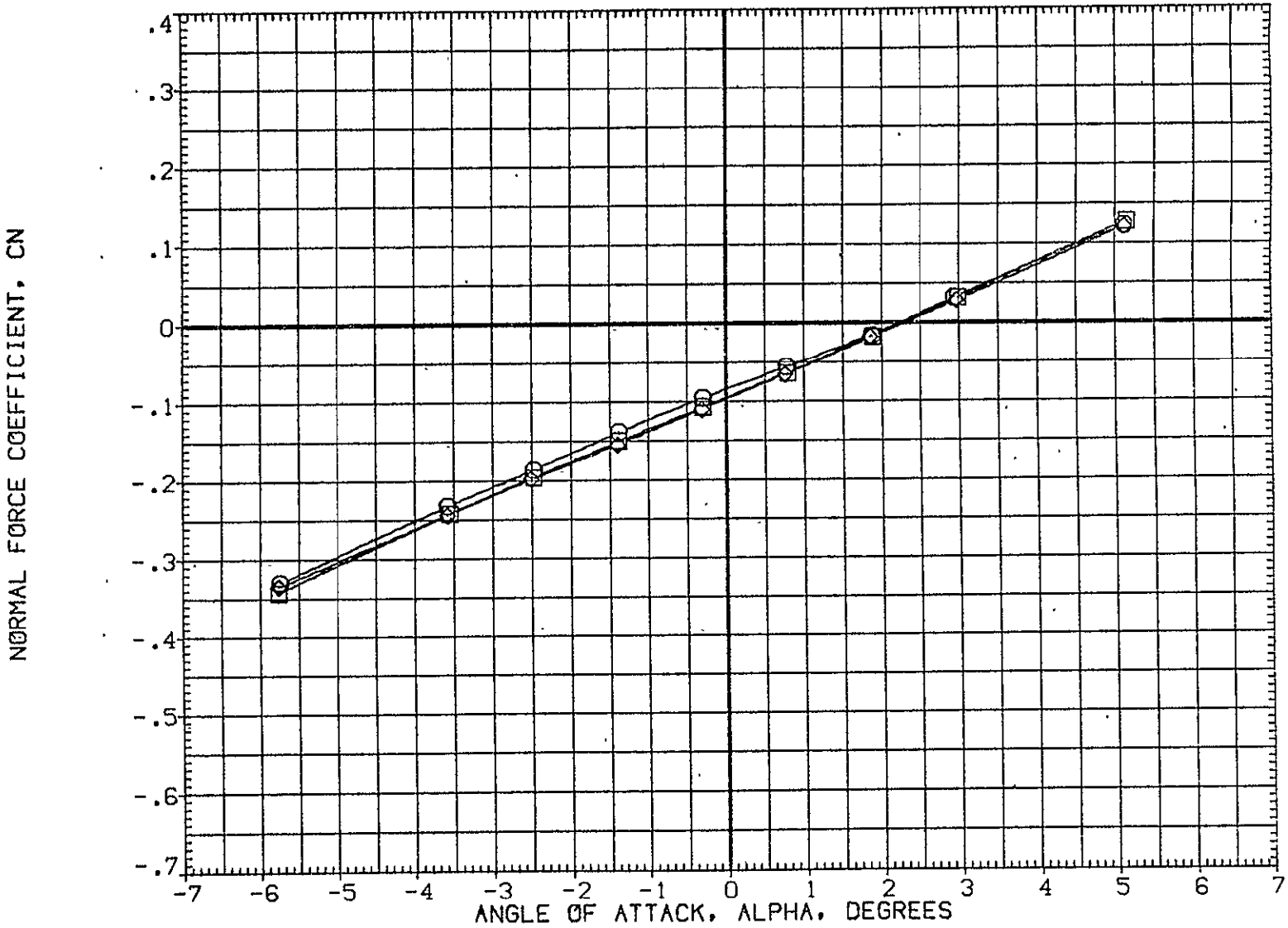


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO10)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1LO11)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1LO12)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

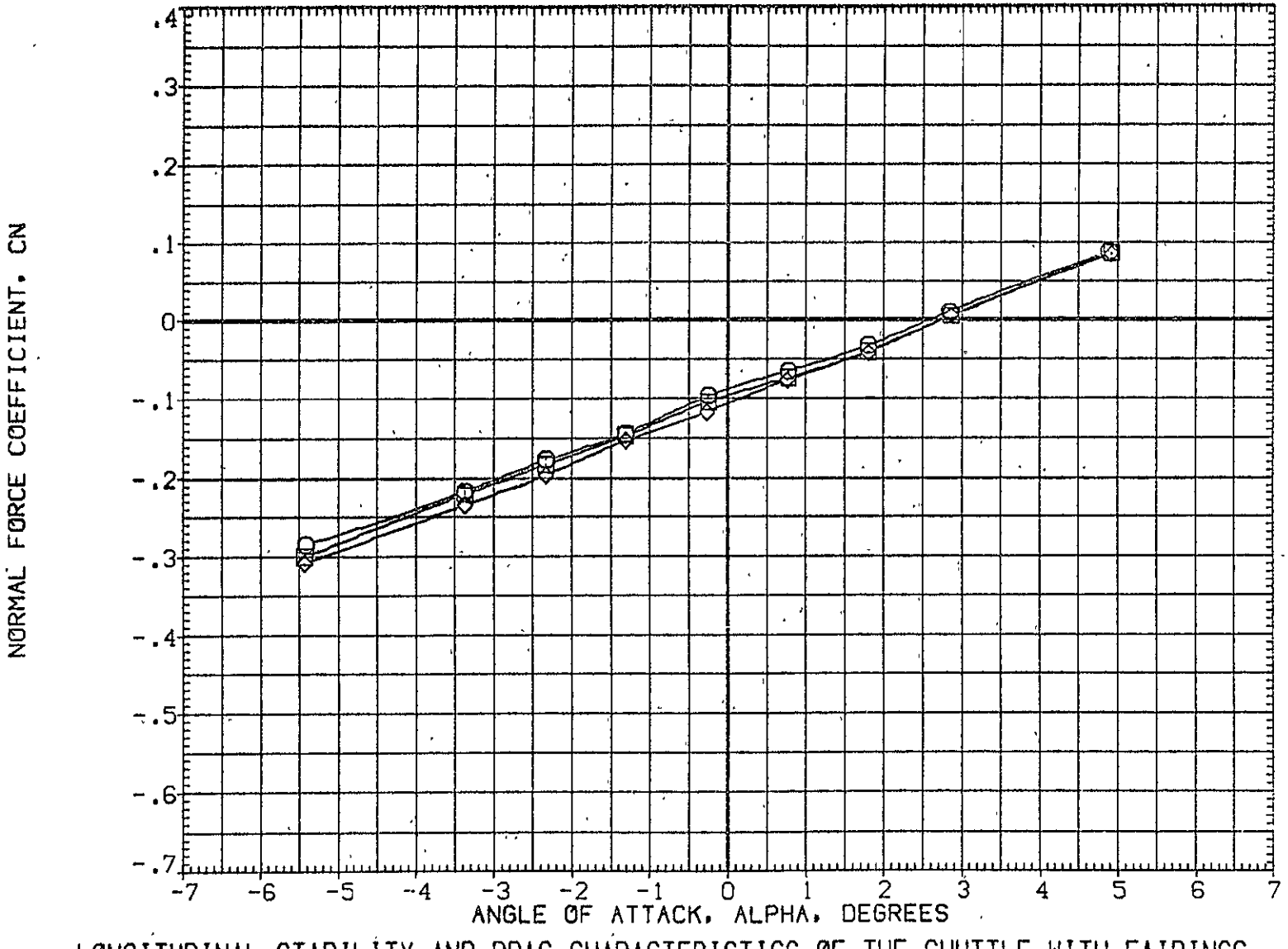


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

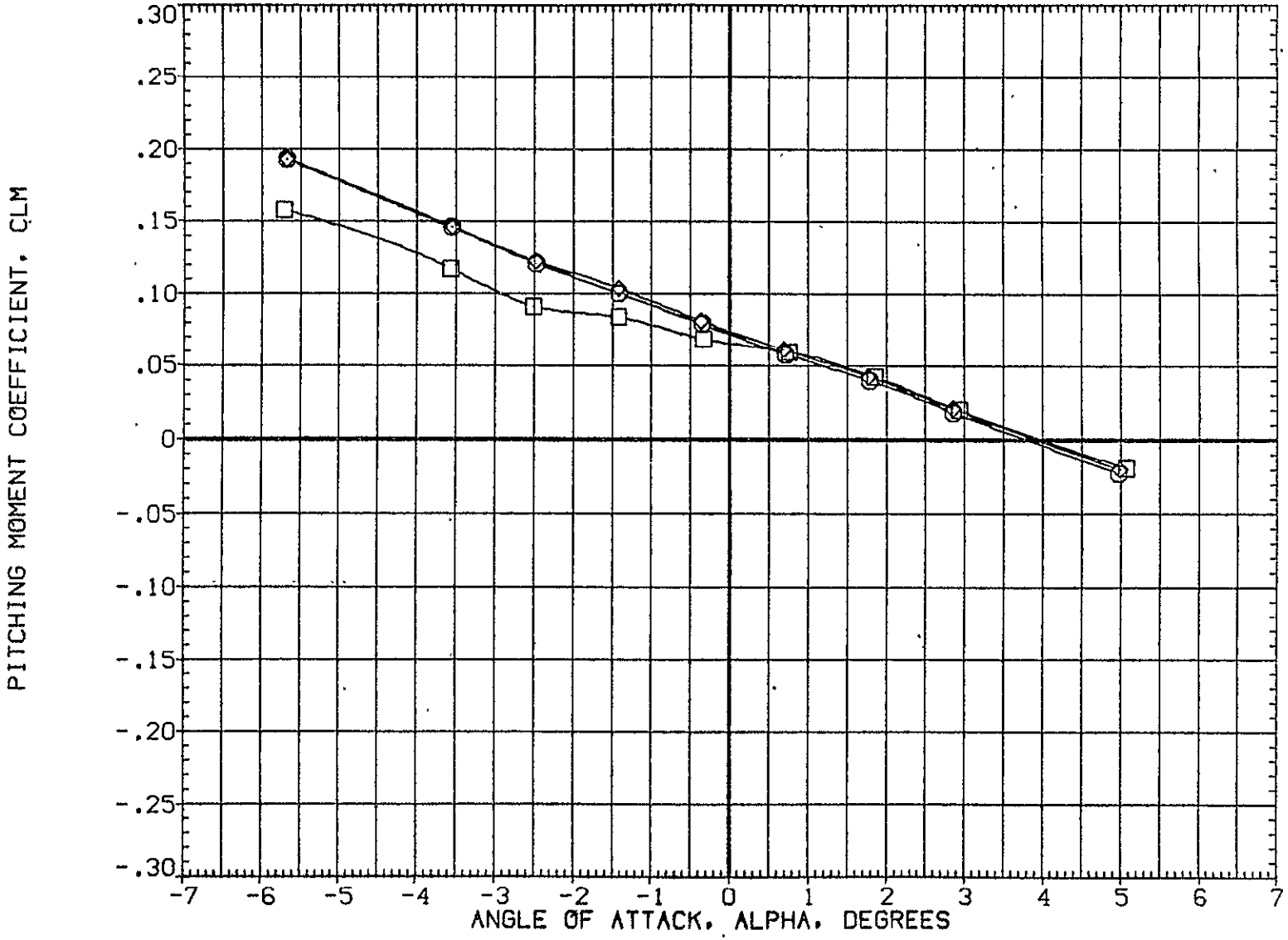


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

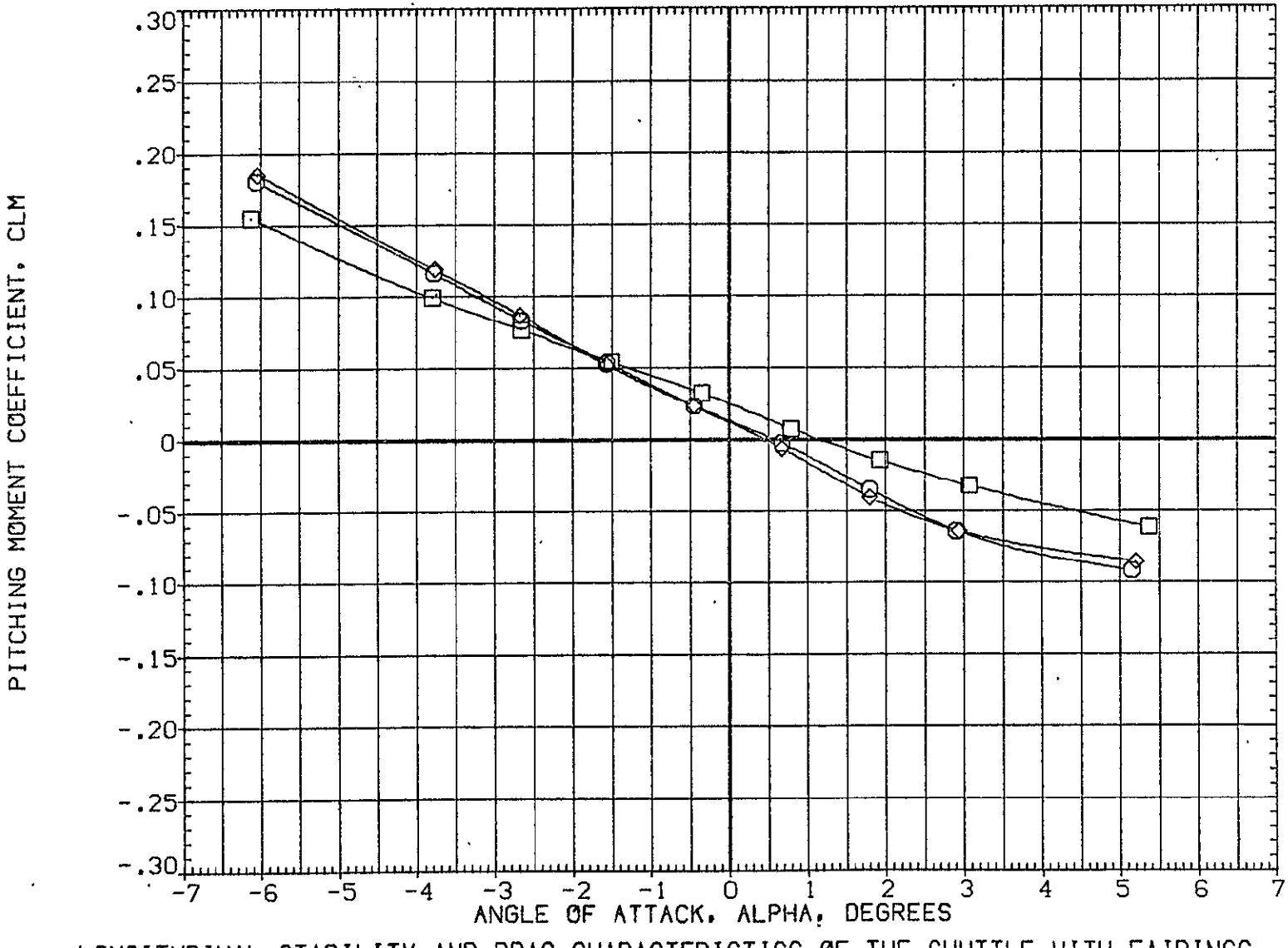


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

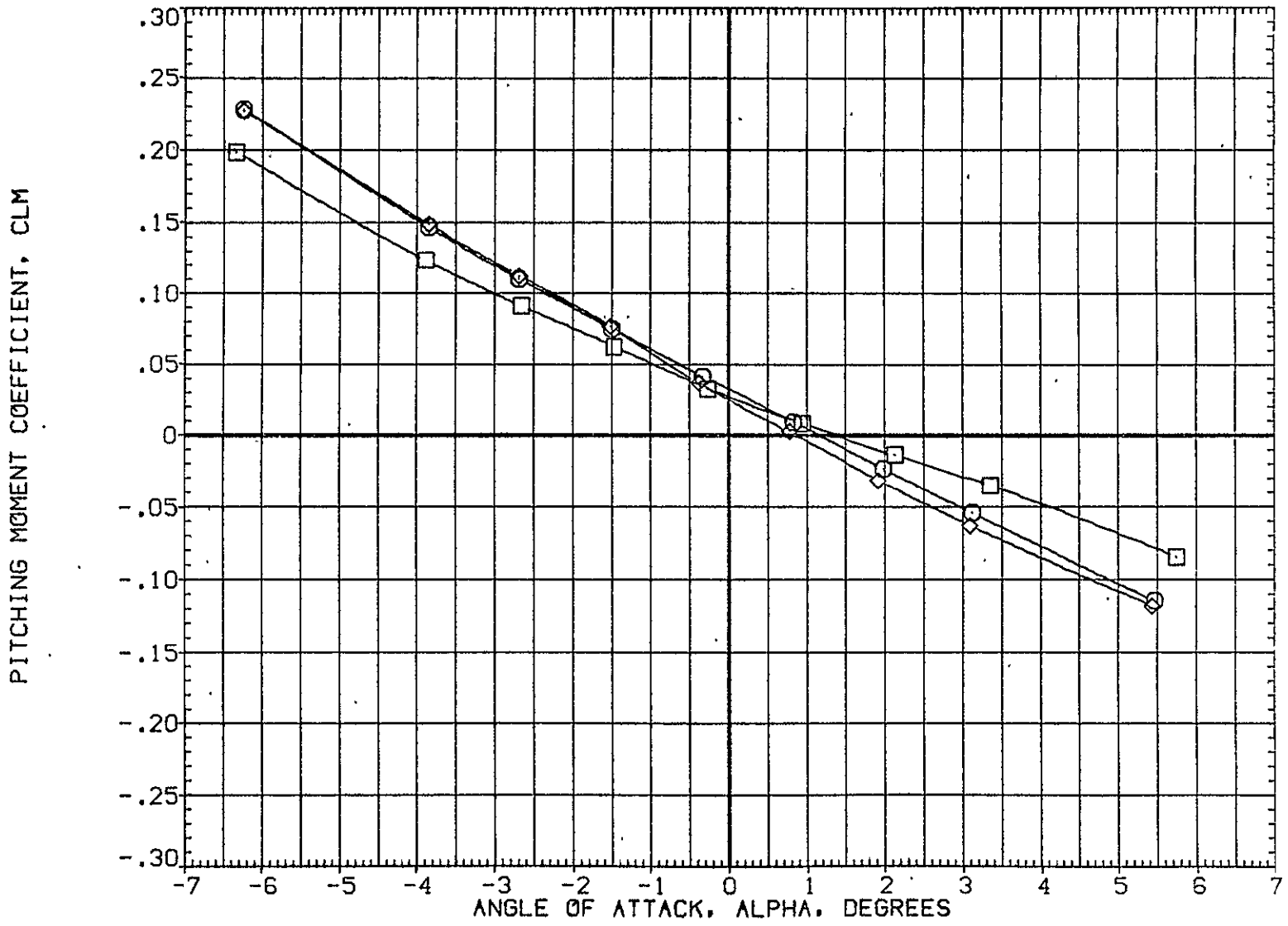


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

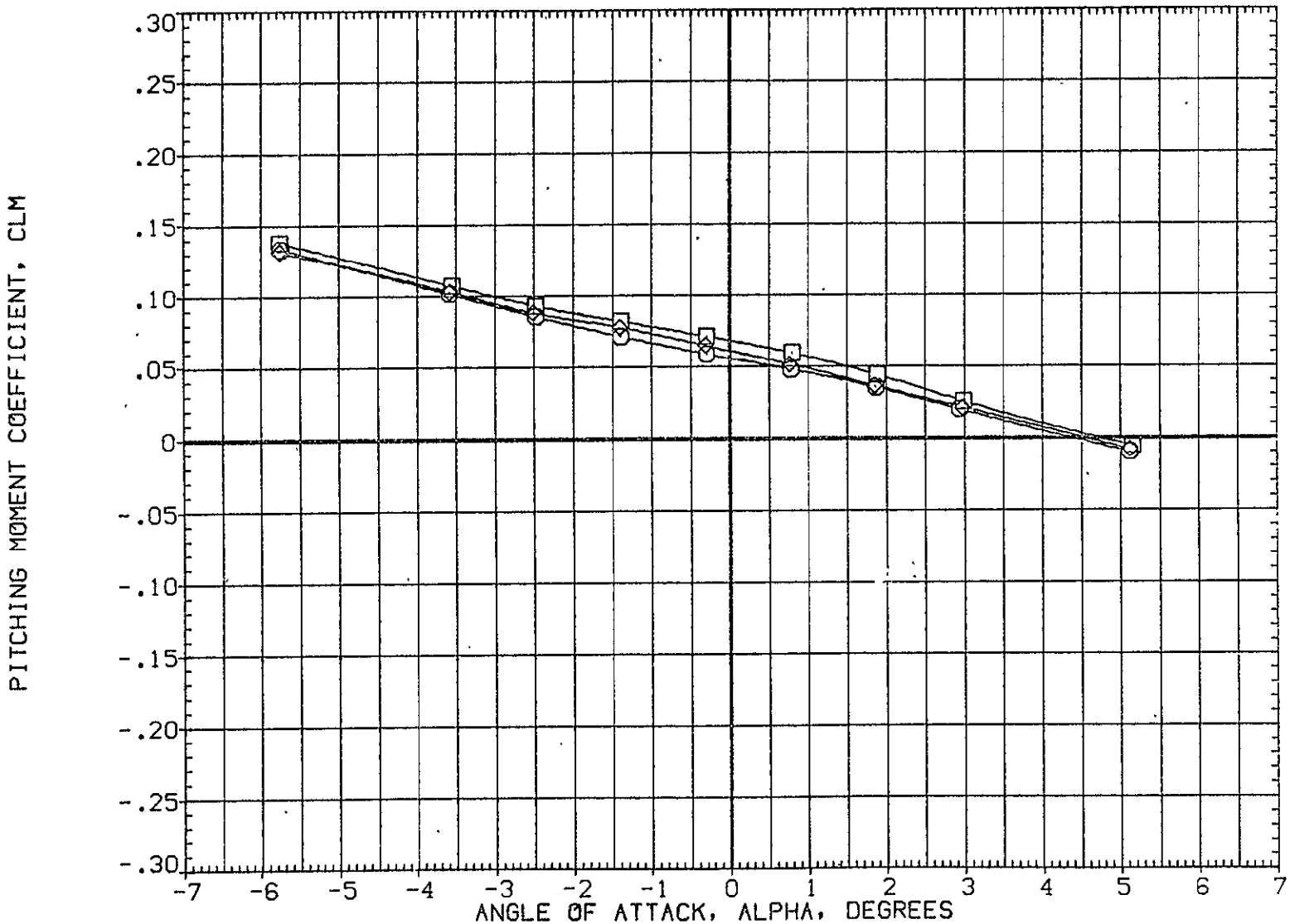


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(AILO11)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(AILO12)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

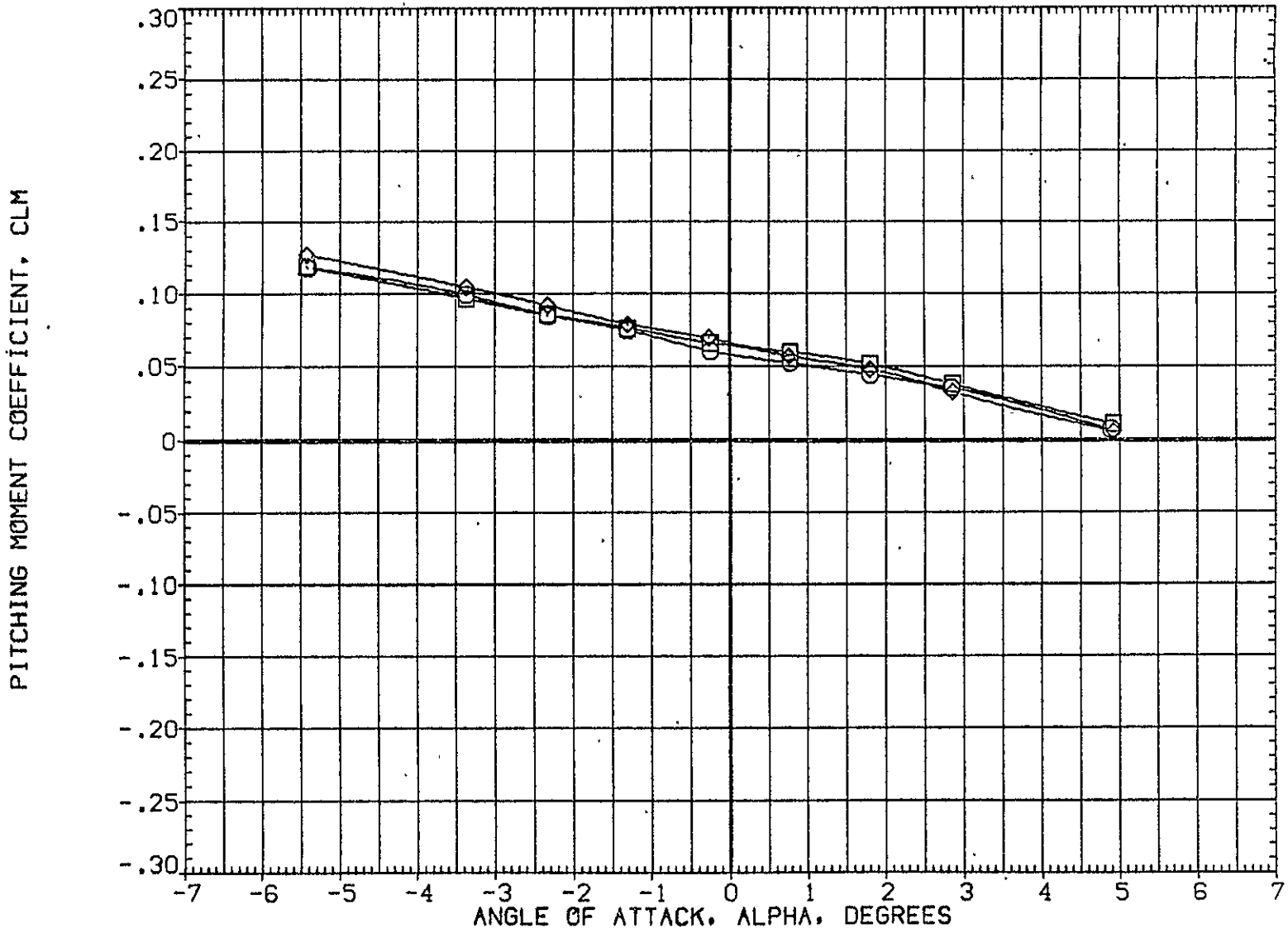


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO10)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1LO11)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1LO12)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

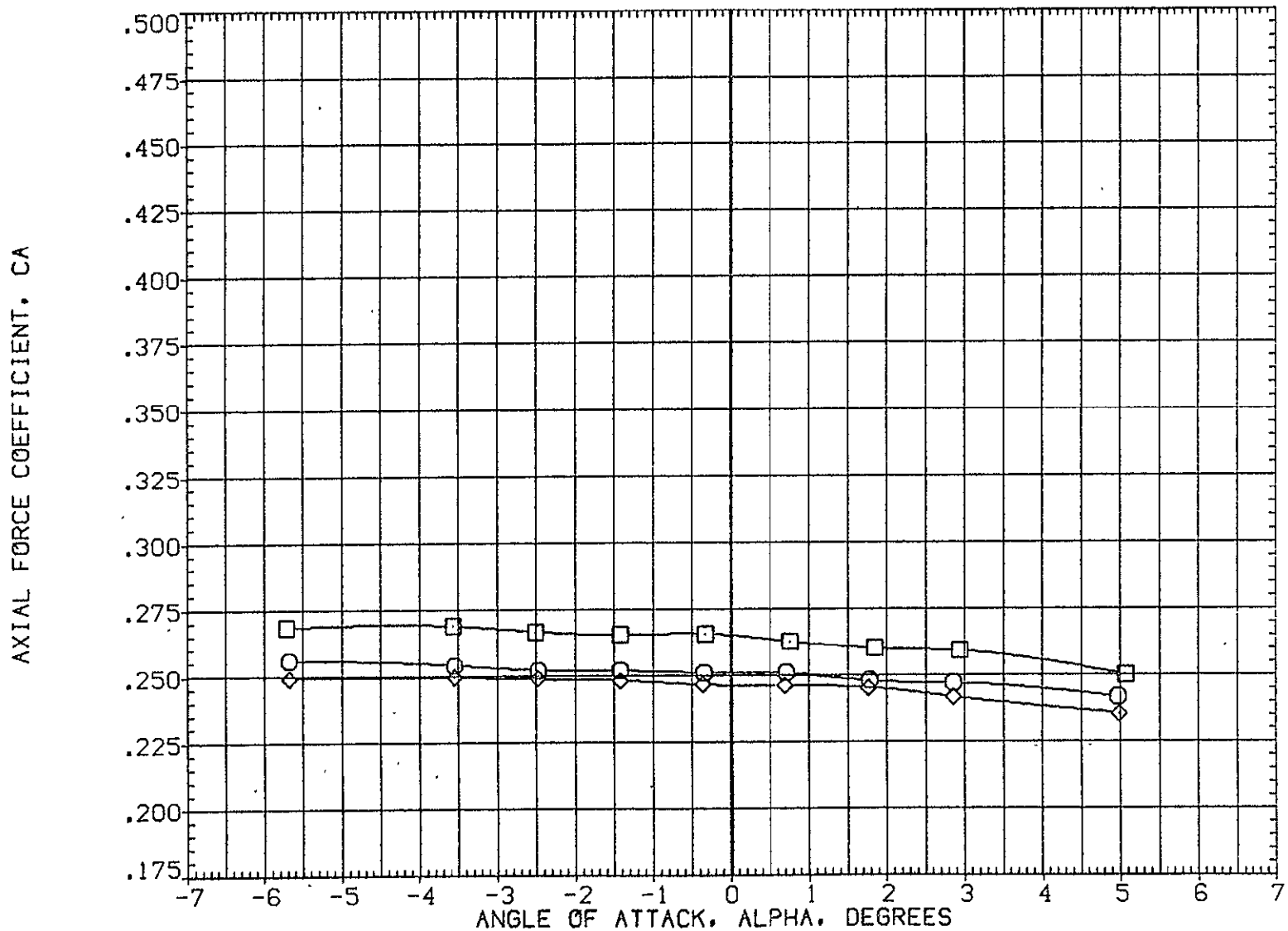


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(AILO11)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(AILO12)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

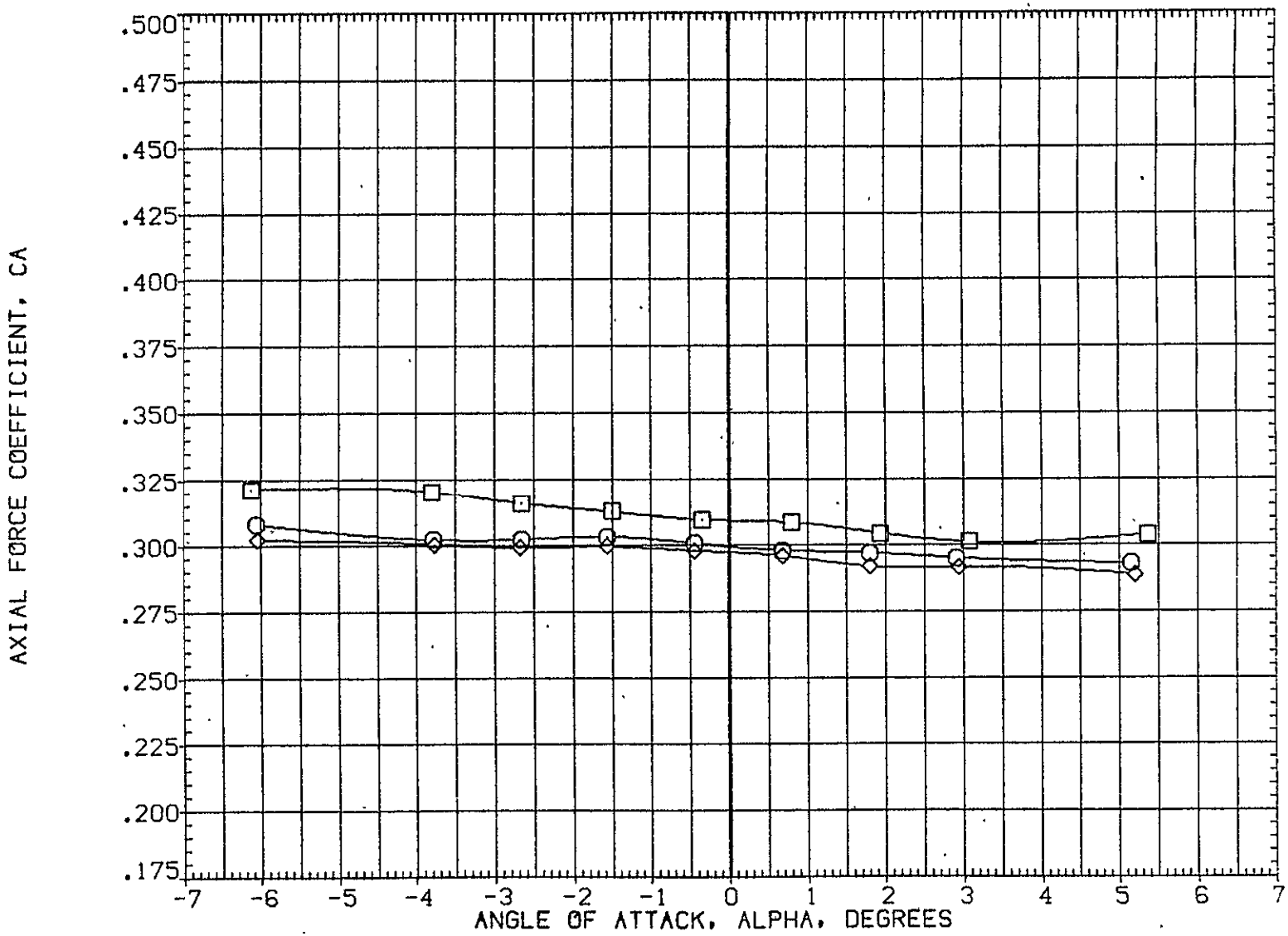


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(AILO11)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(AILO12)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



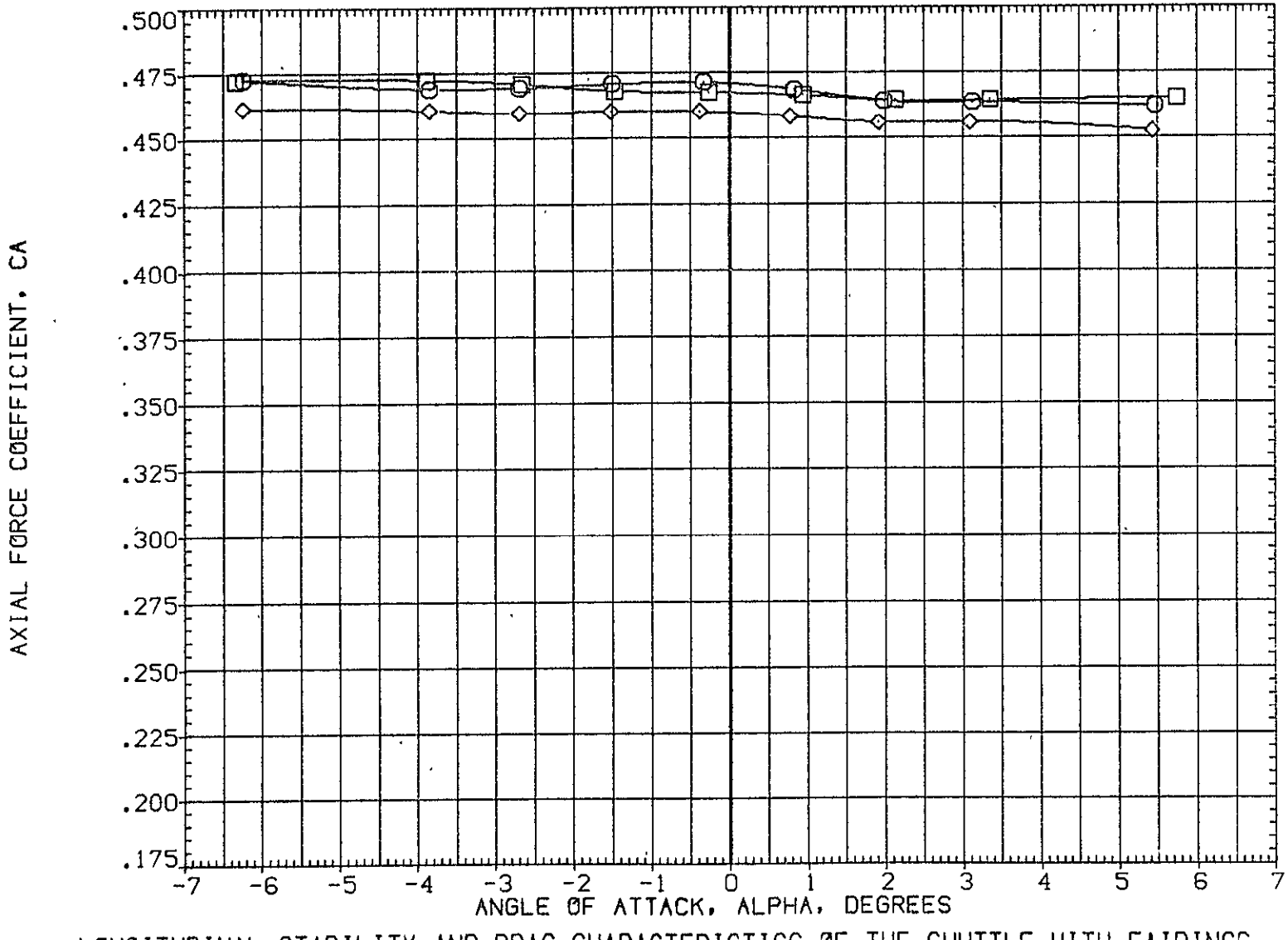
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

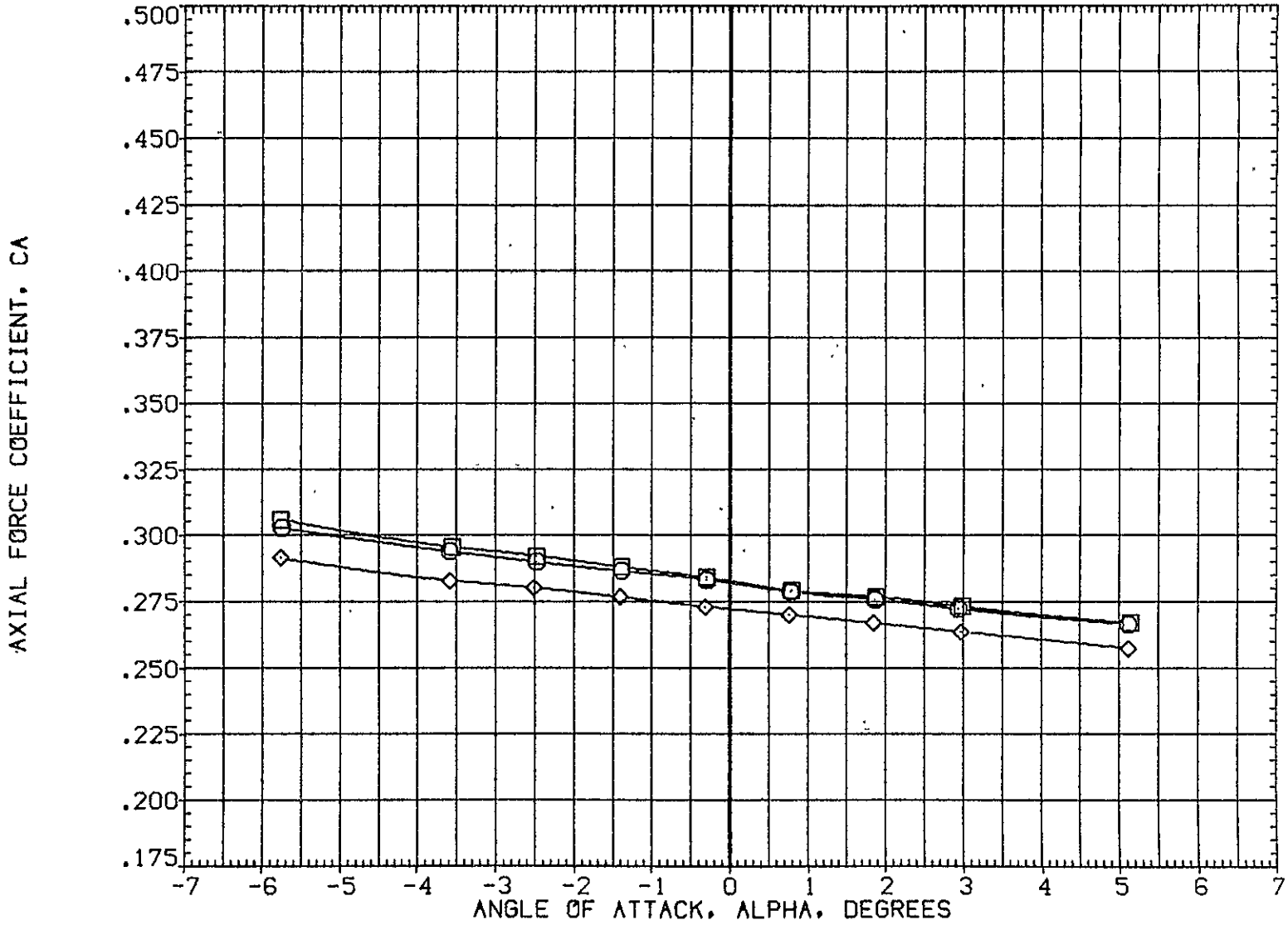


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)	▢	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(AILO11)	◁▷	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(AILO12)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

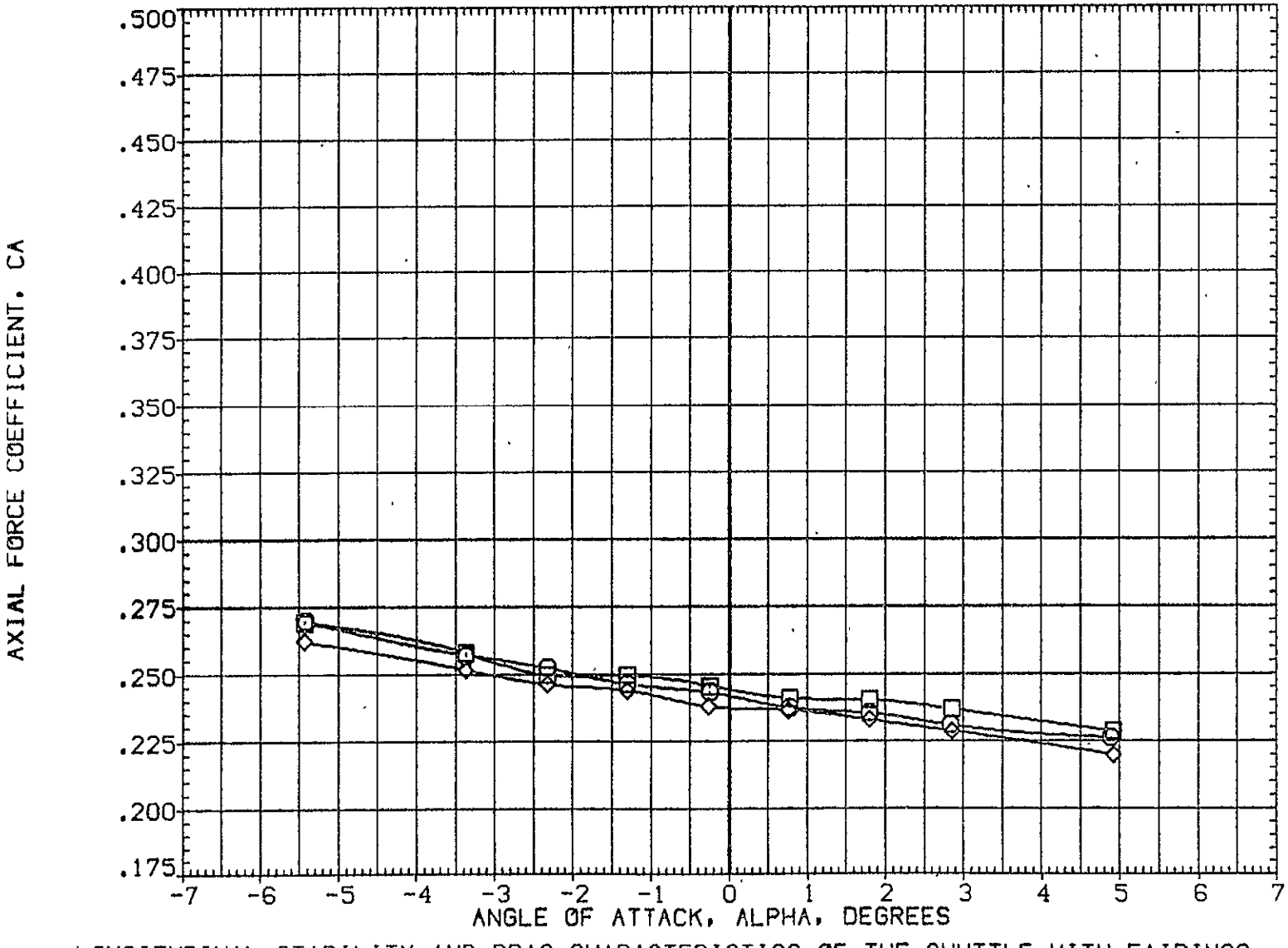


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(AILO11)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(AILO12)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

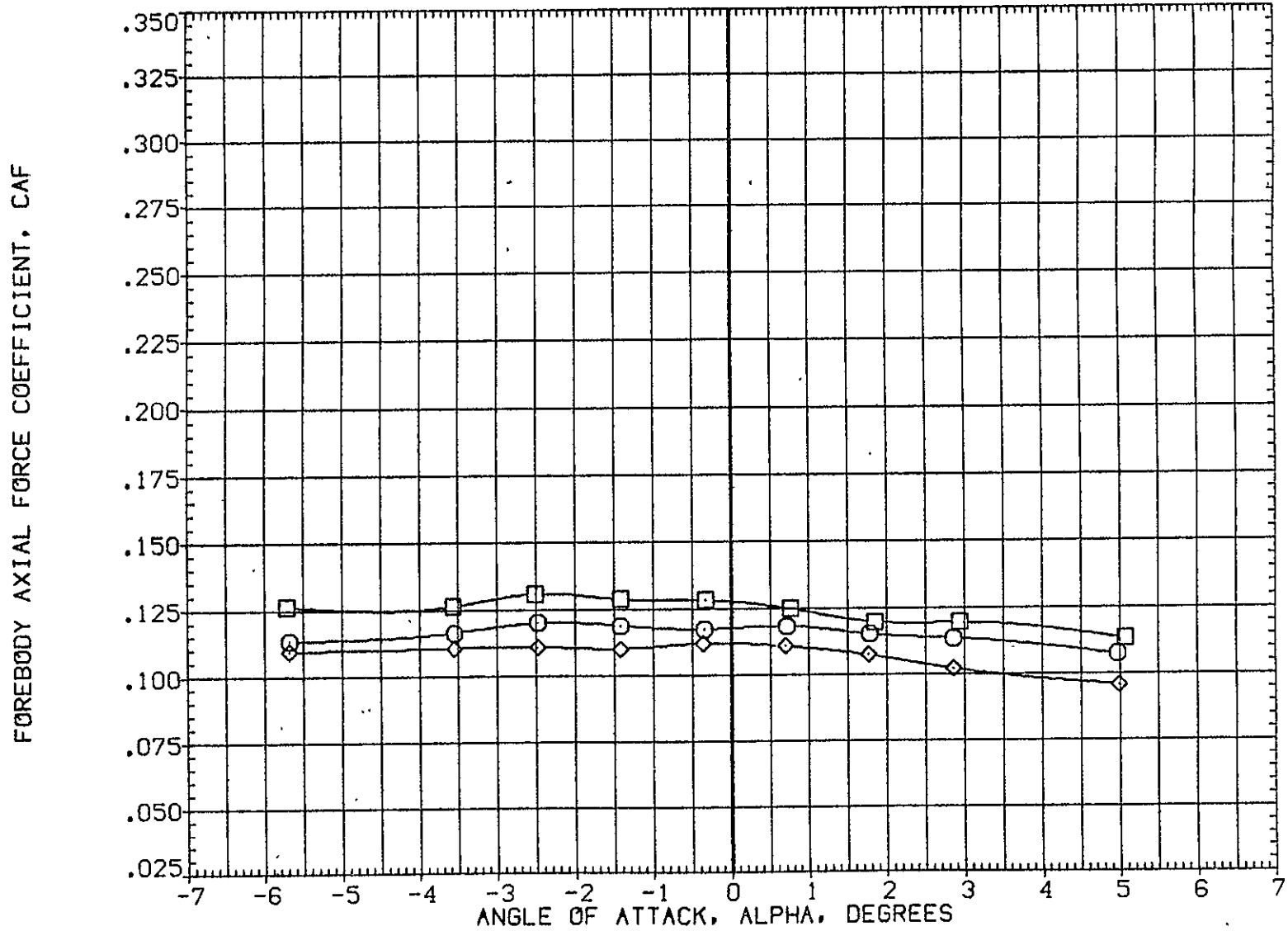


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO10)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1LO11)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1LO12)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

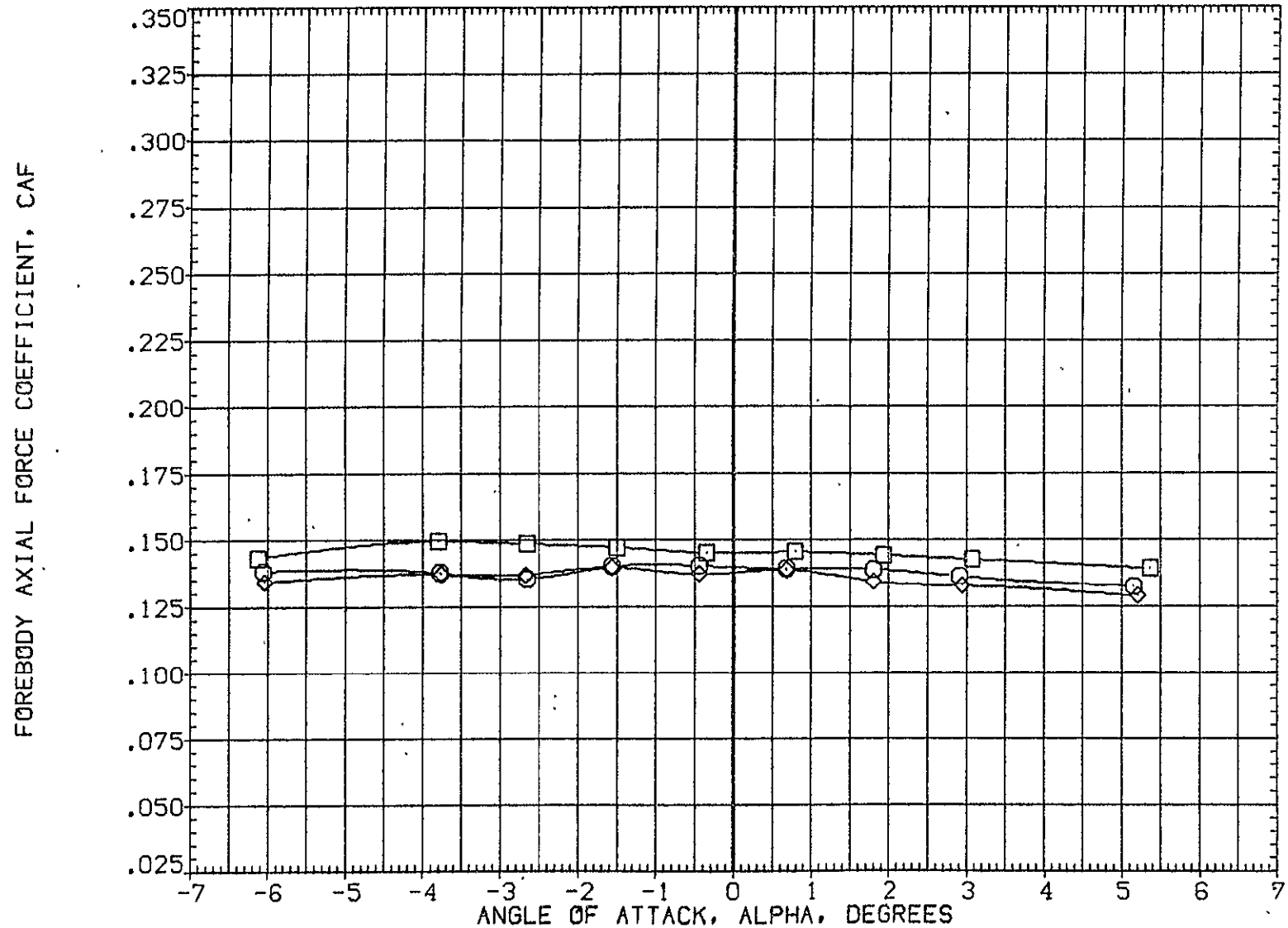


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

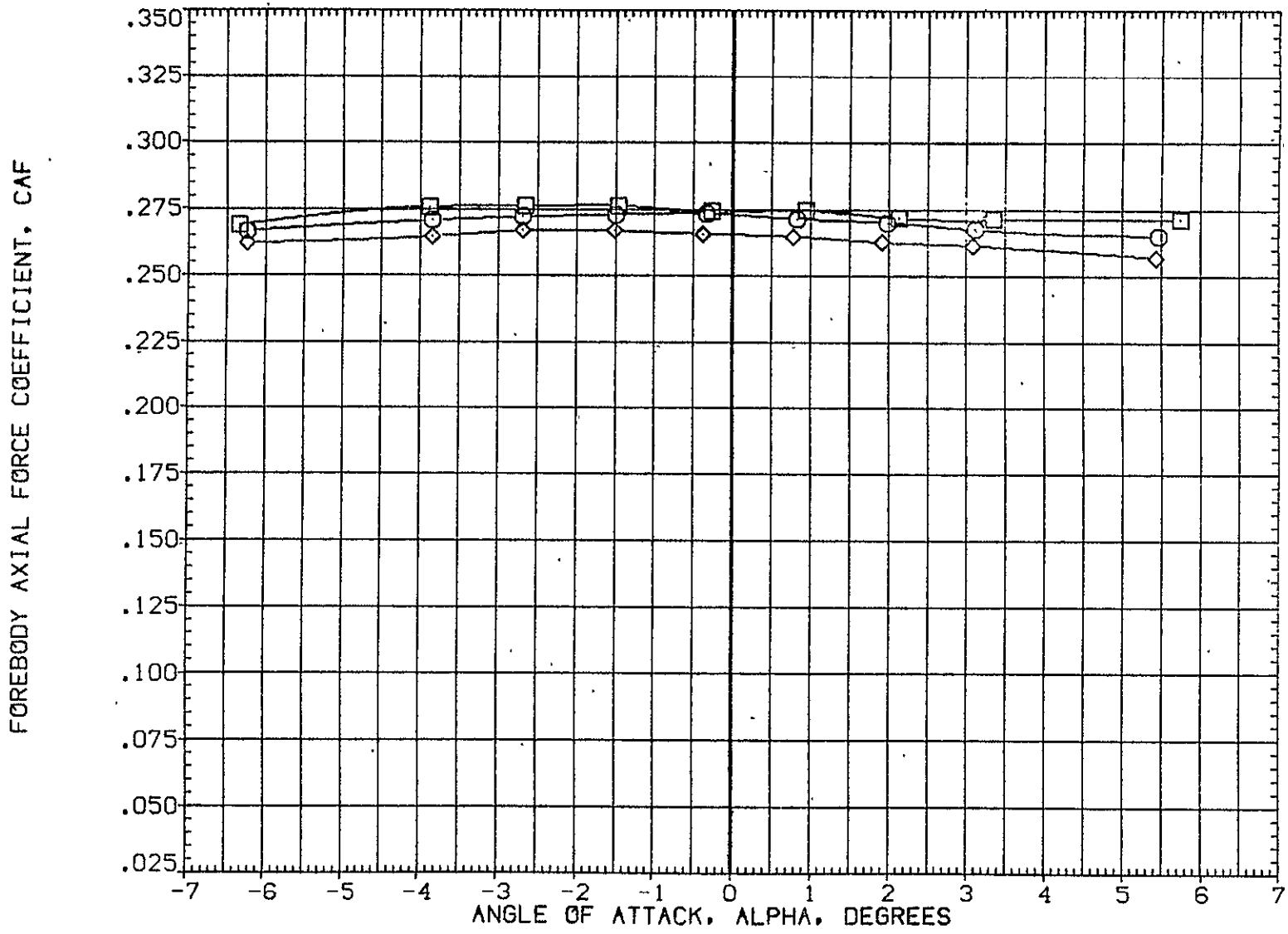


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(AILO11)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(AILO12)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



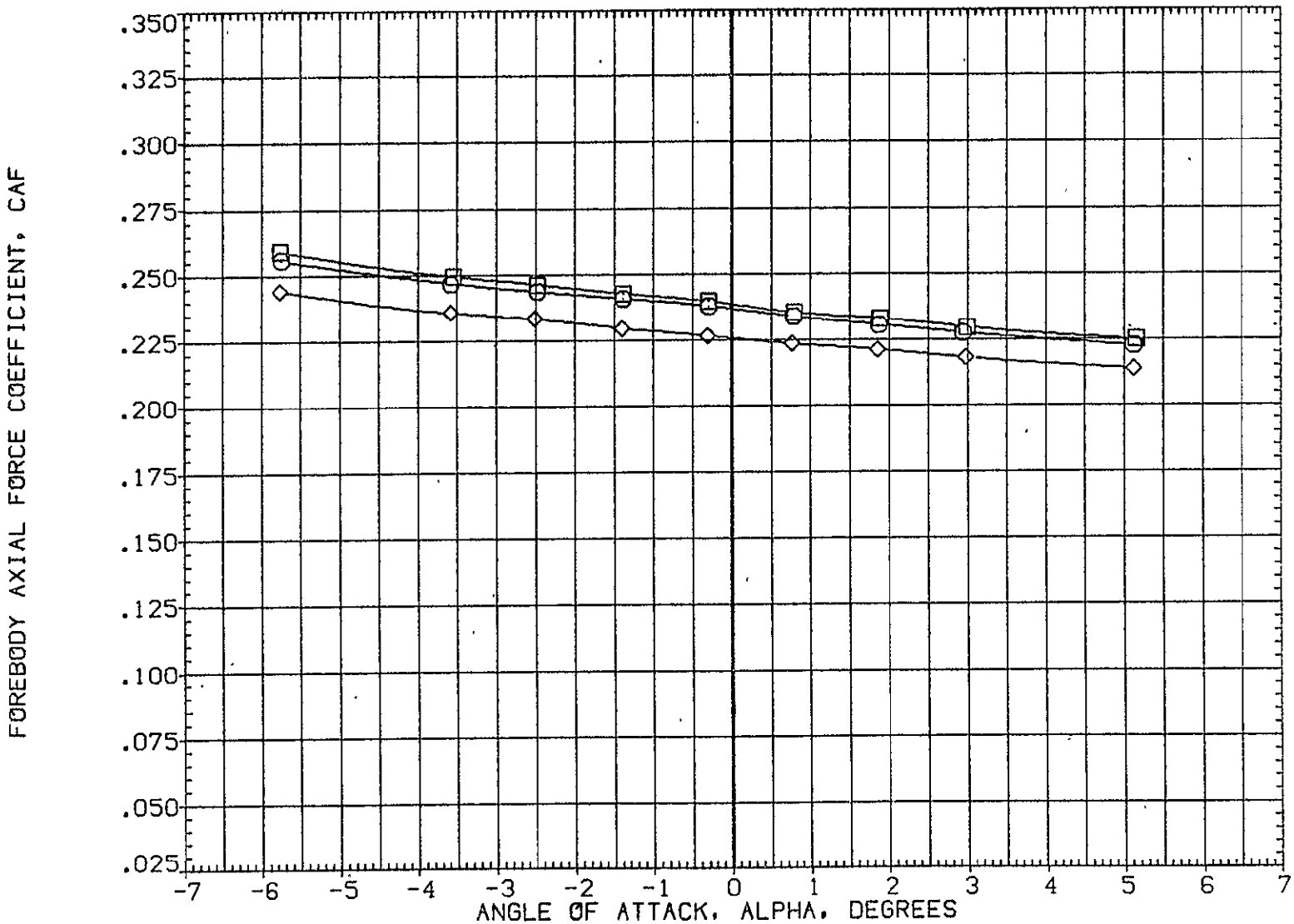
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L010)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

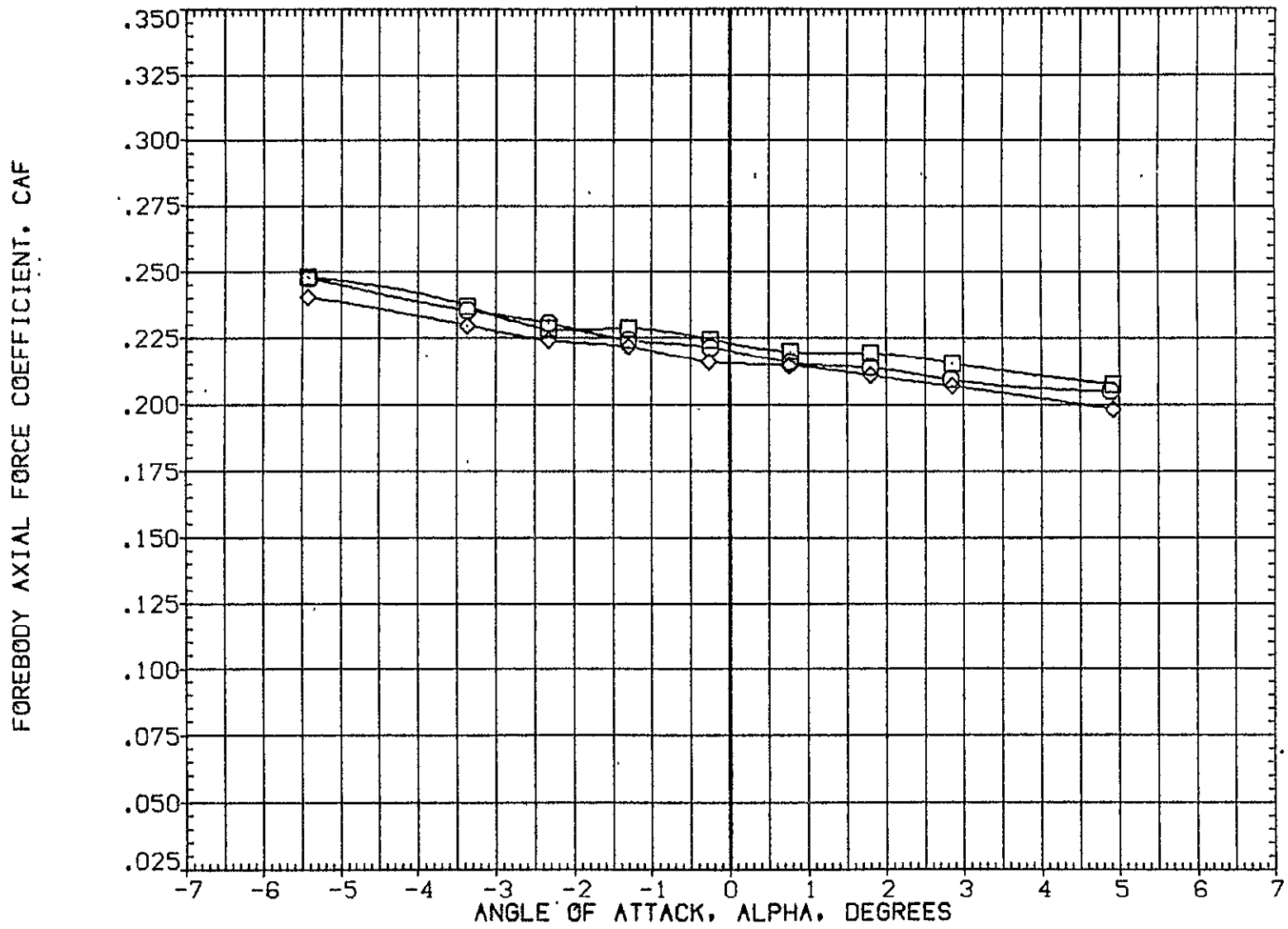


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO10) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(AILO11) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(AILO12) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

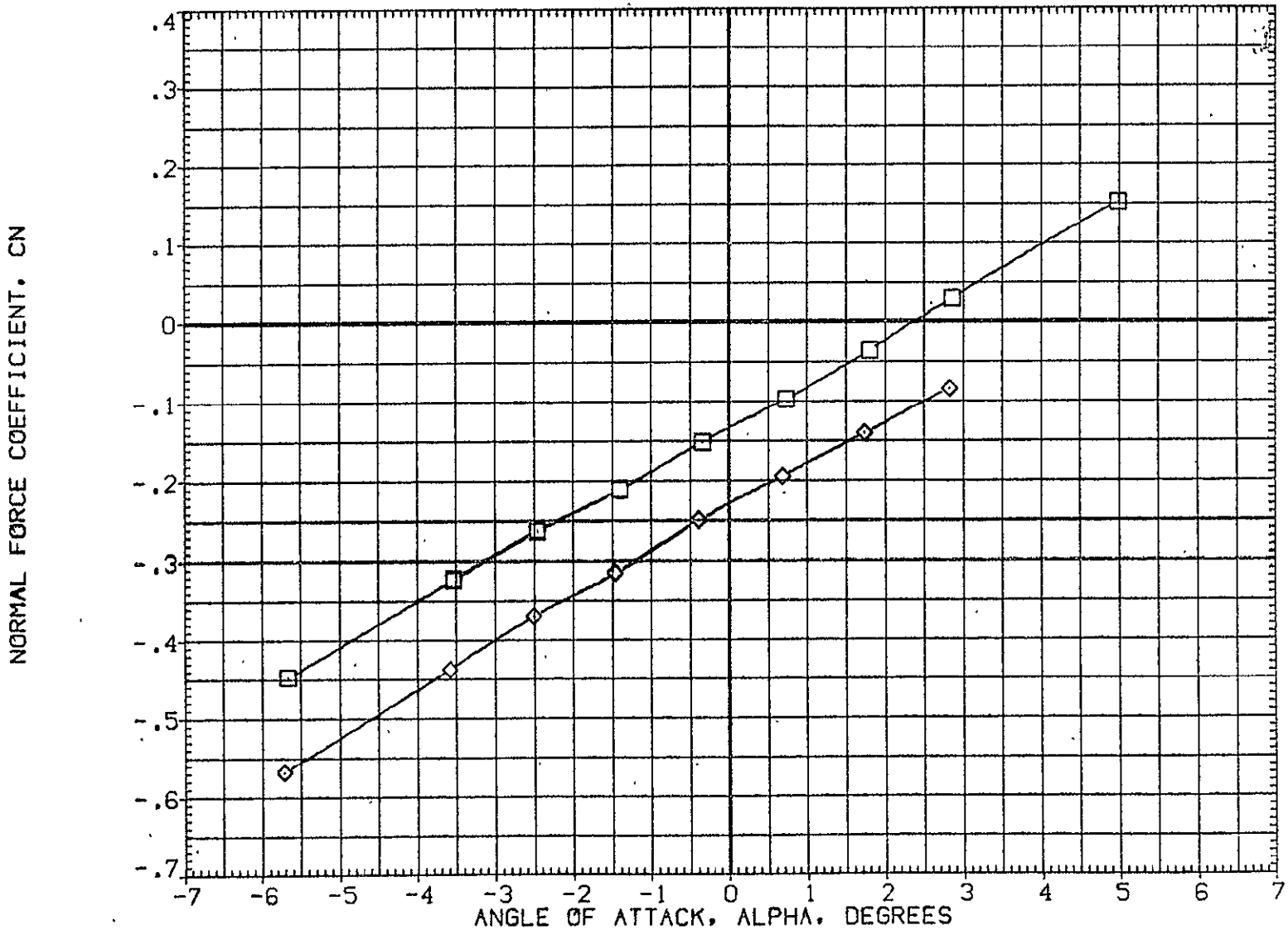


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO14)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

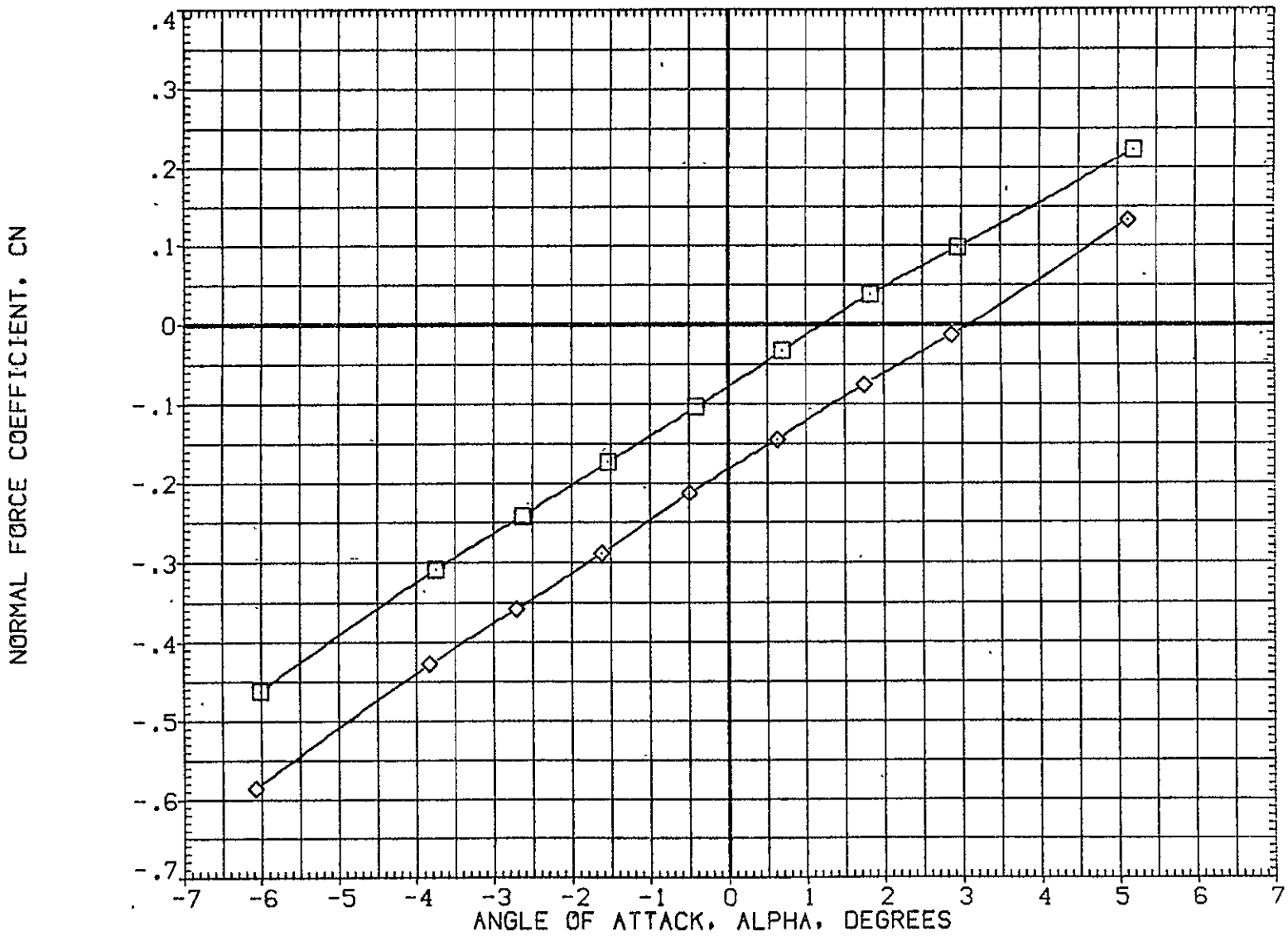


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO14)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

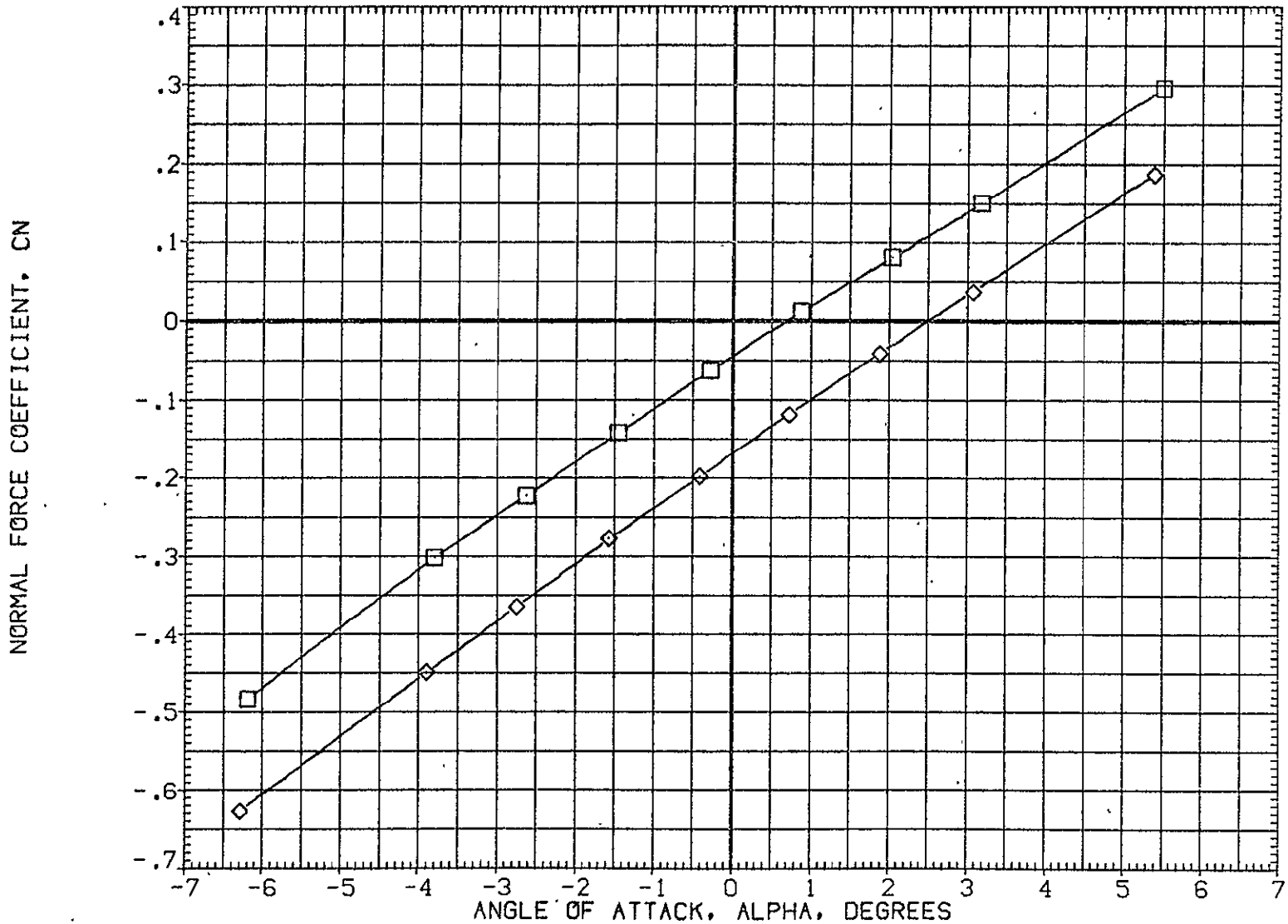


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L013)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L014)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

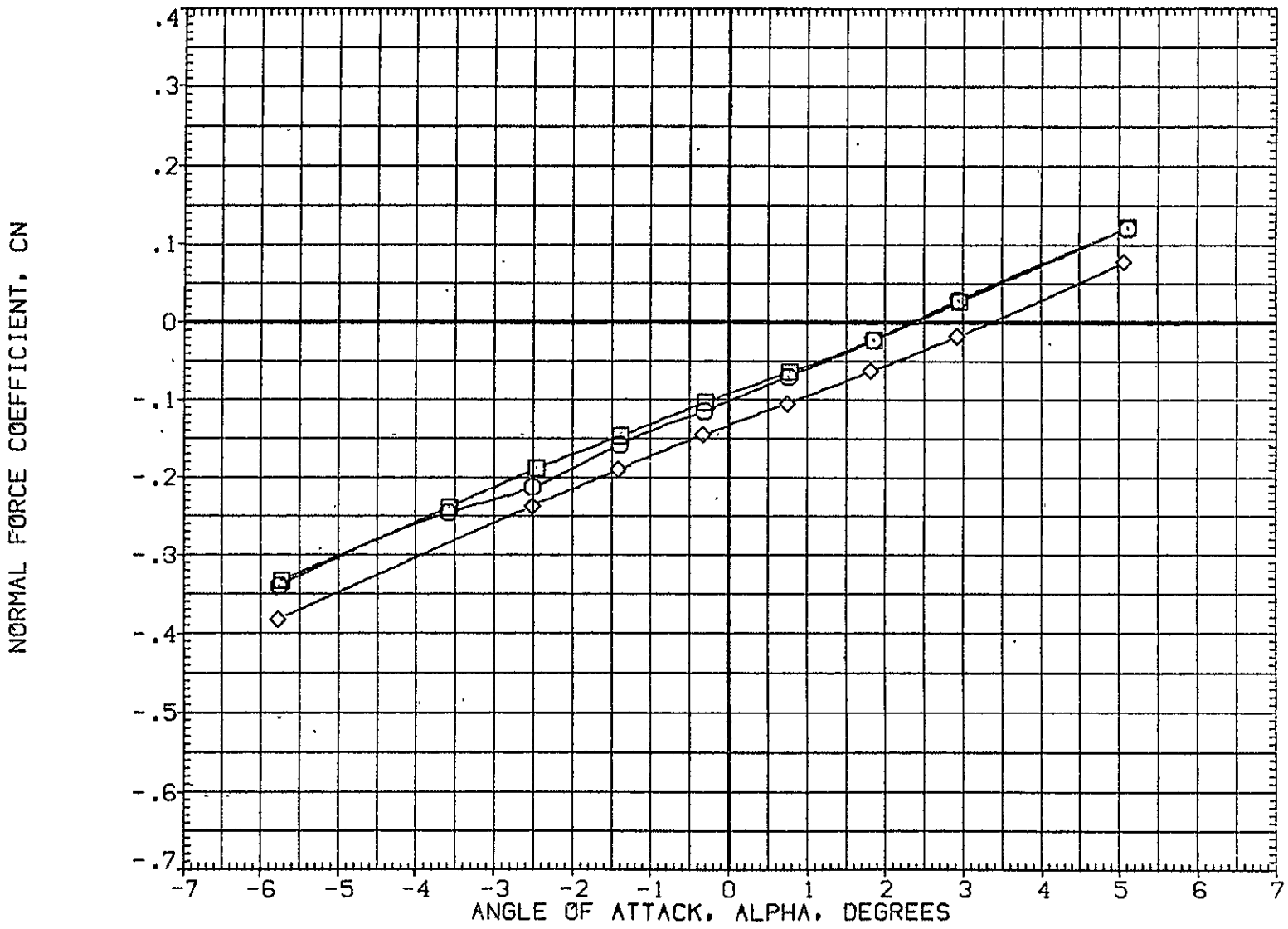


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	.Z
(A1L013)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(A1L014)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

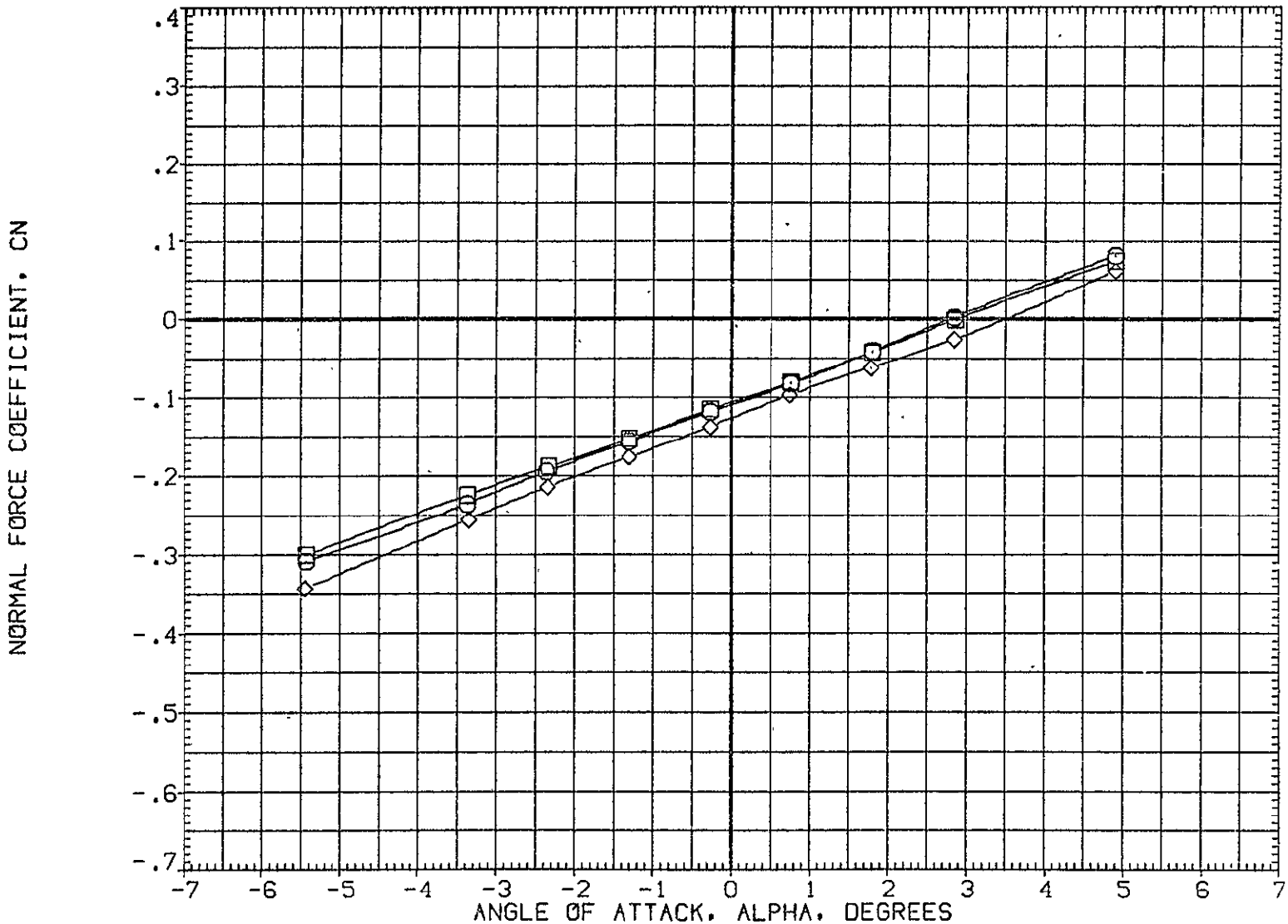


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(AILO14)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

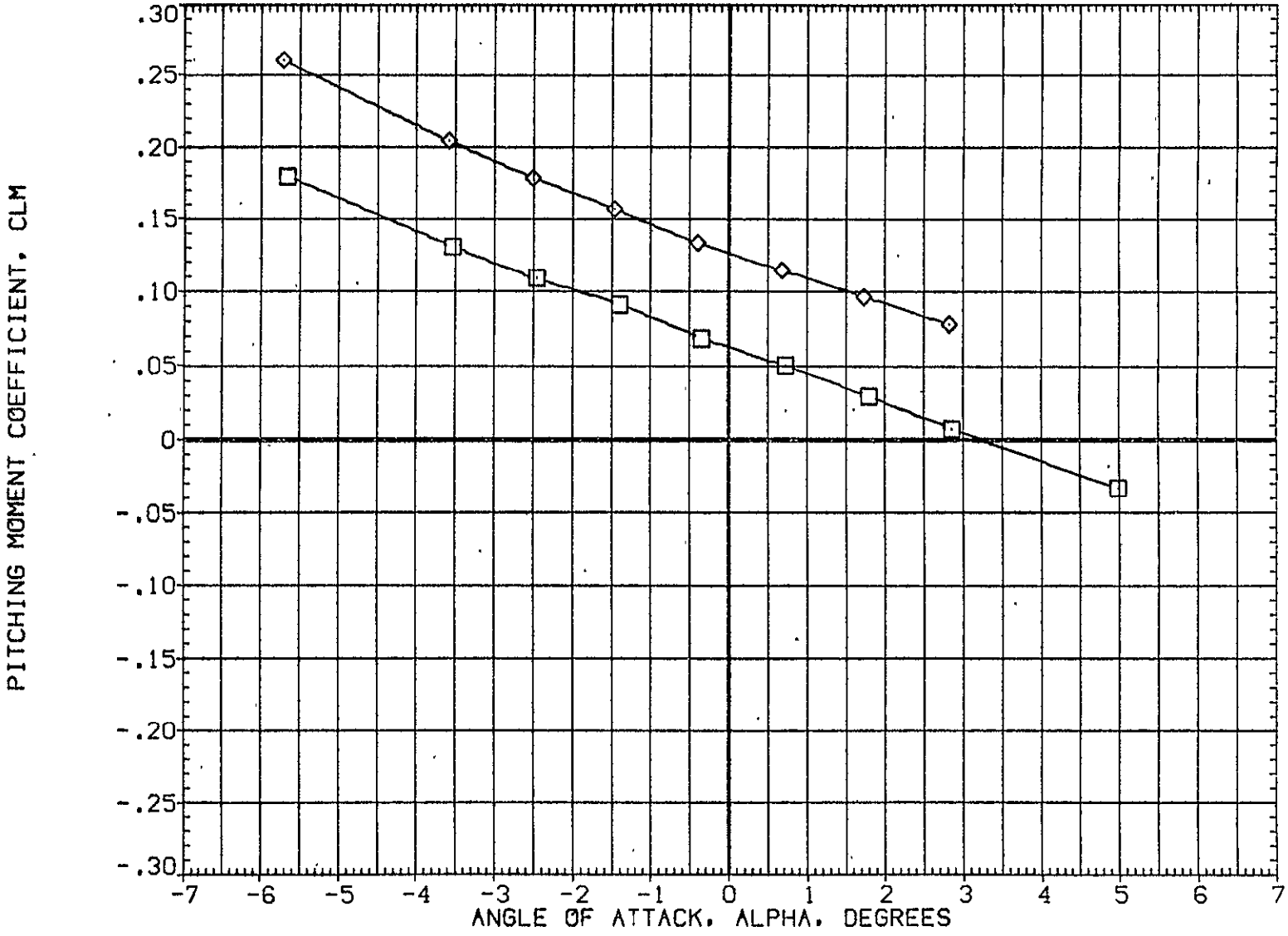


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO14)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

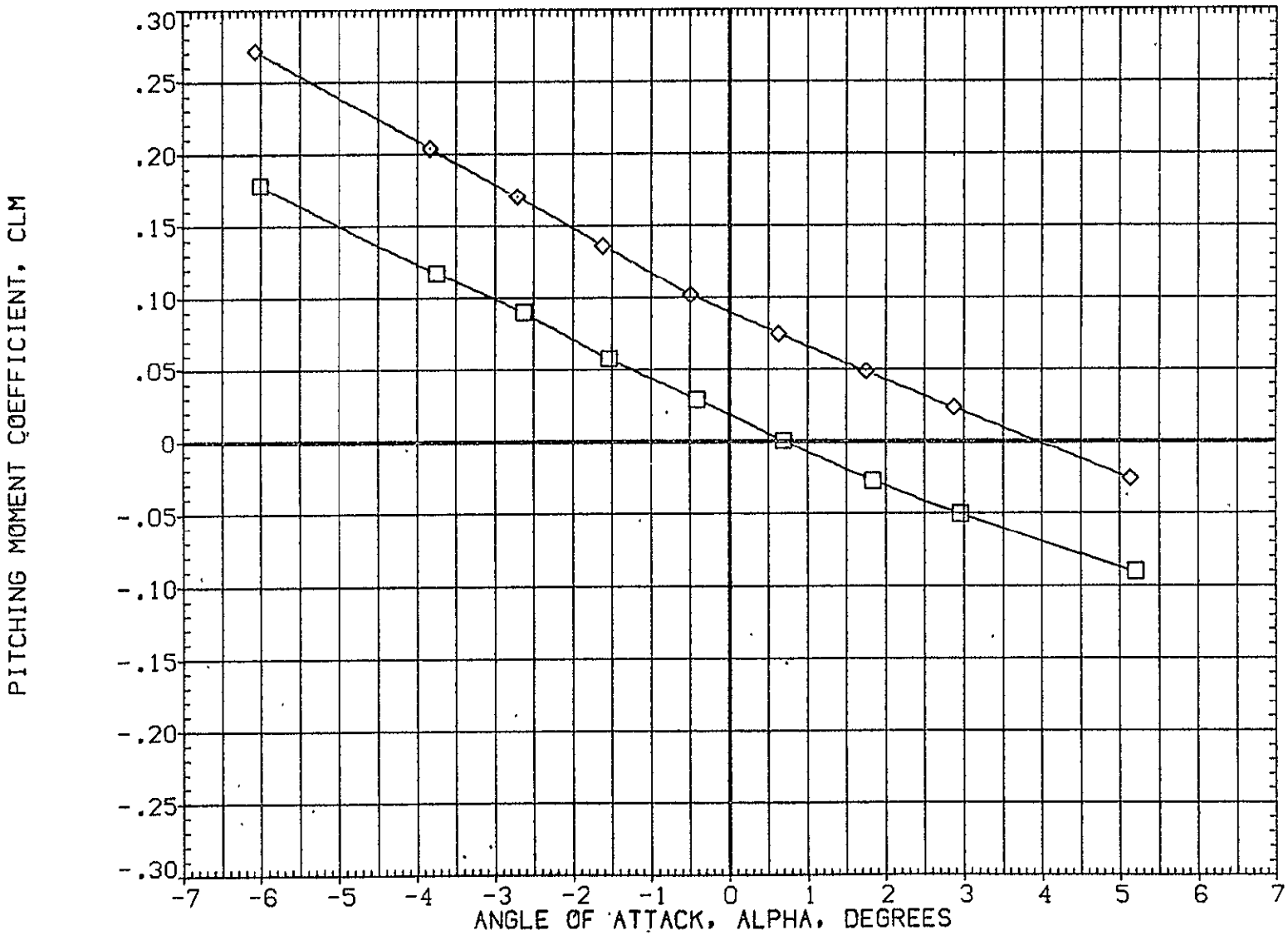


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13) ○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO14) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

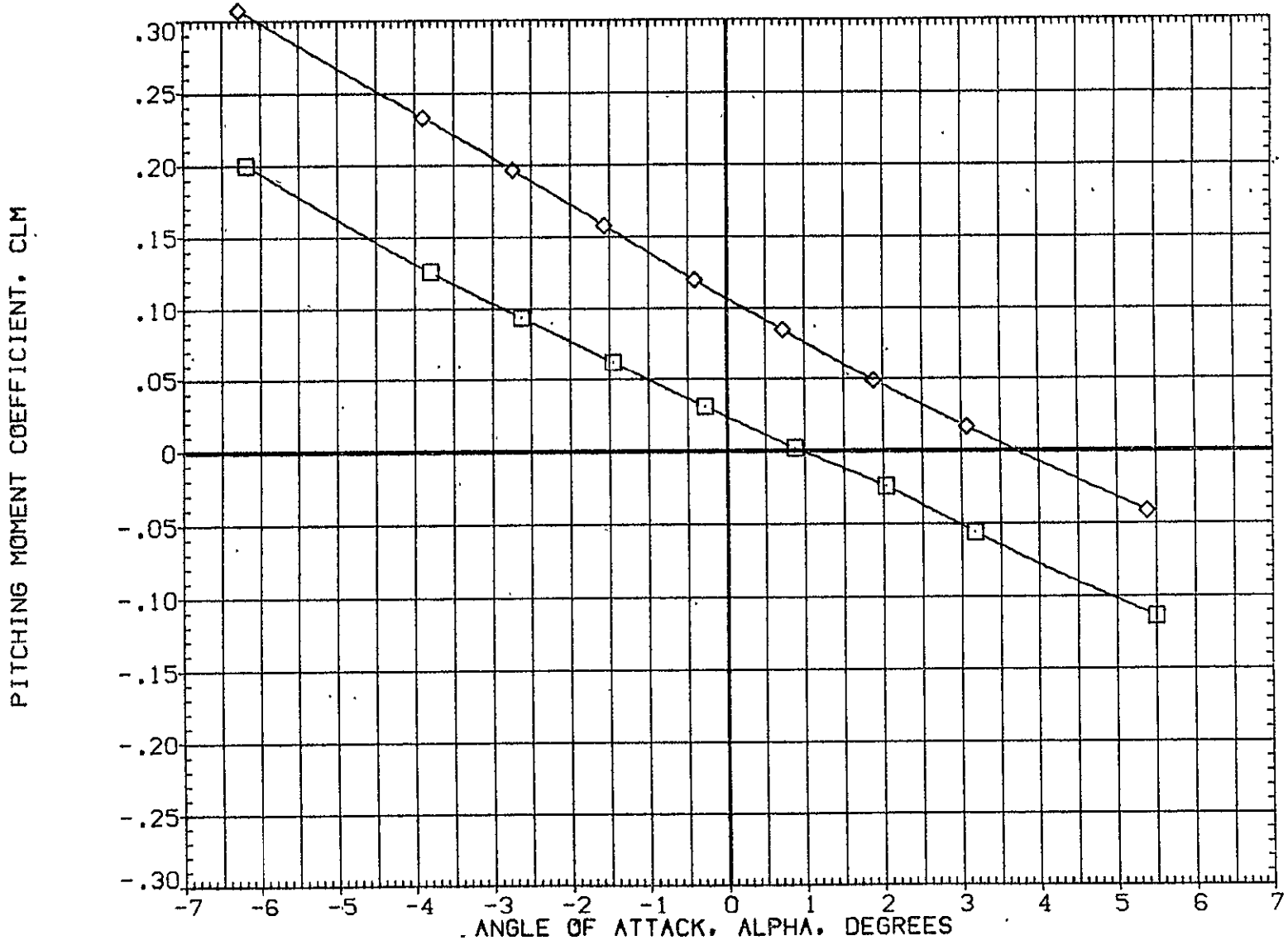


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L013)	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L014)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

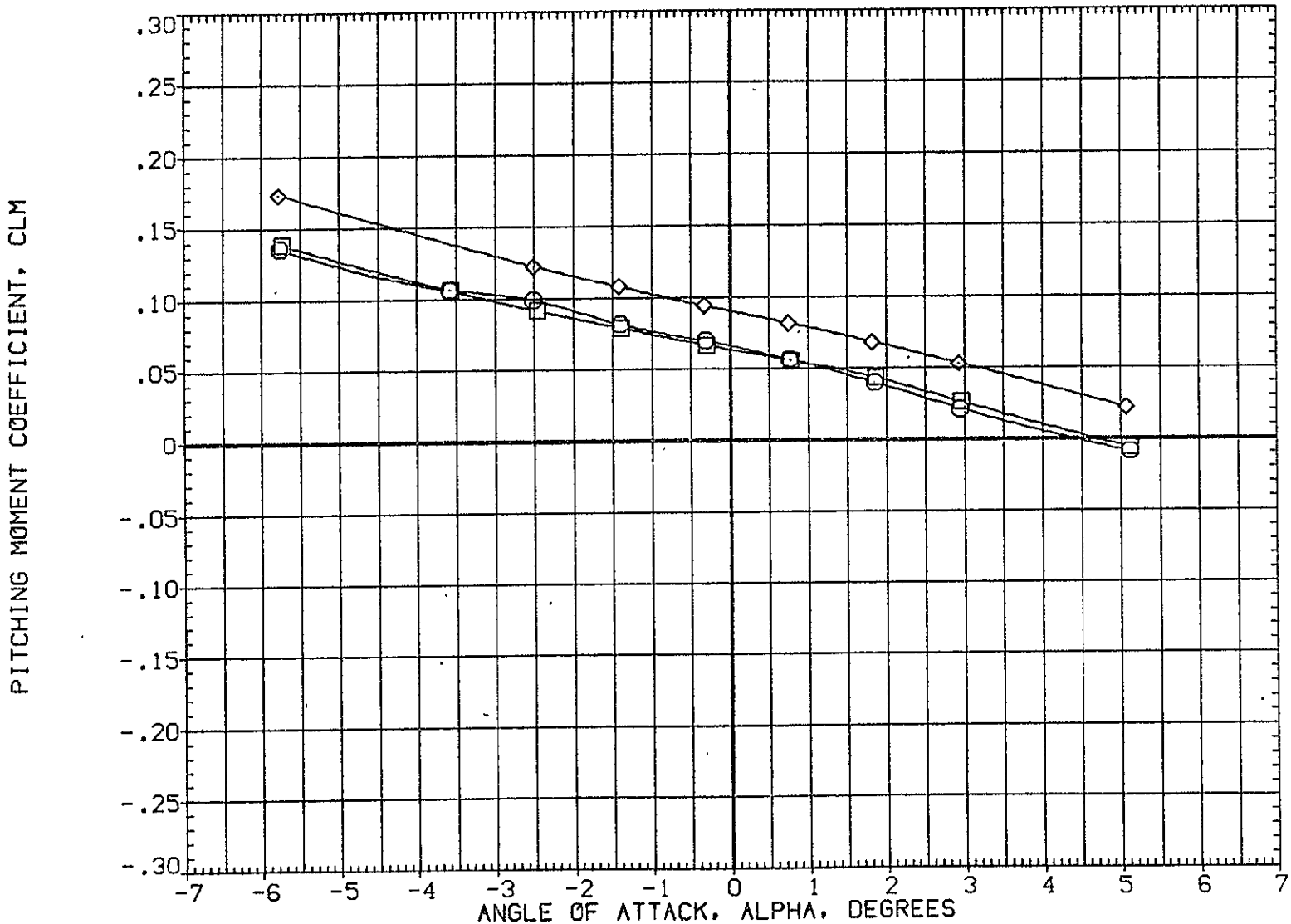


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(AILO14)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

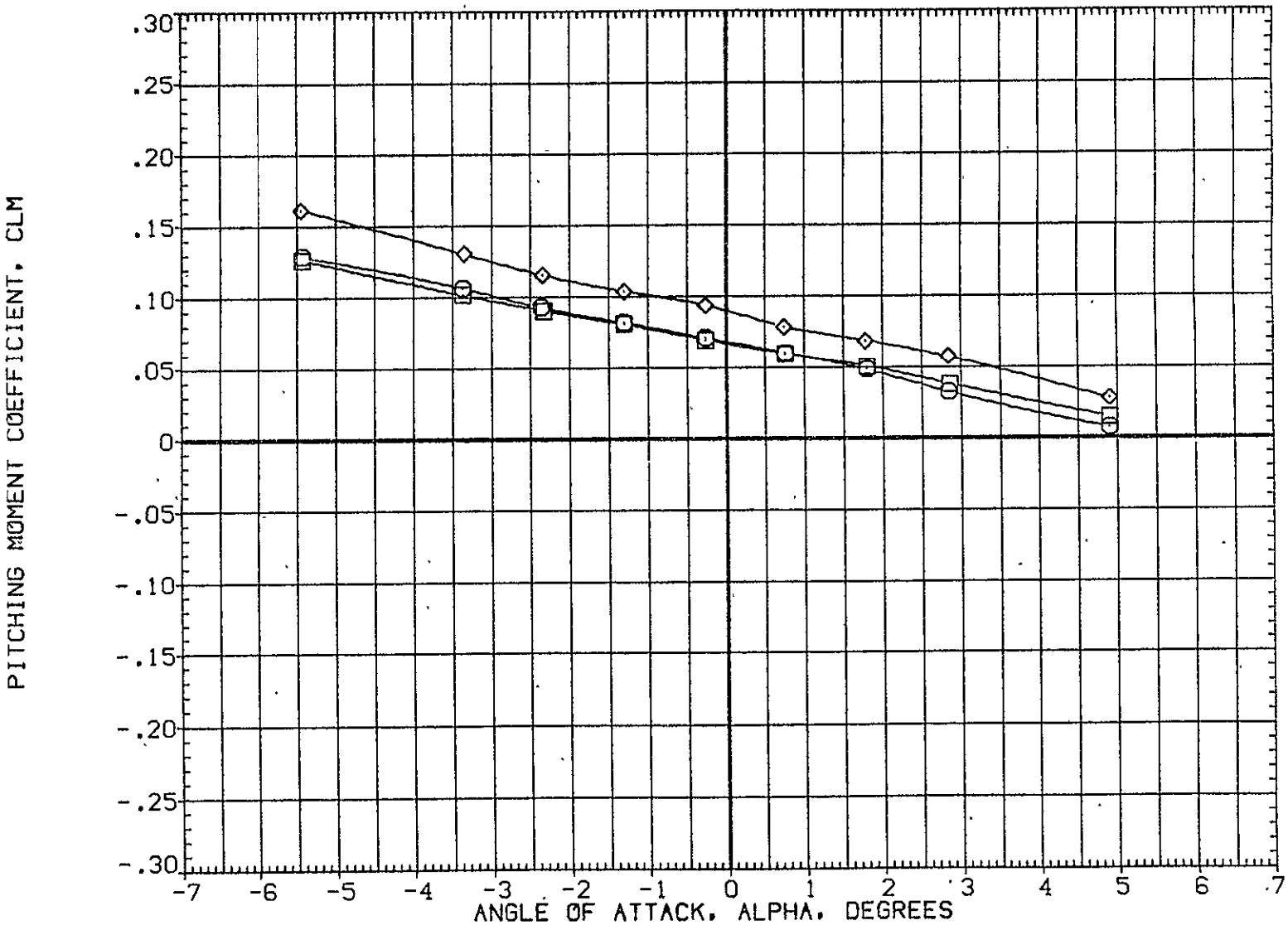


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L013)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(A1L014)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. ZT
SCALE	.0040	



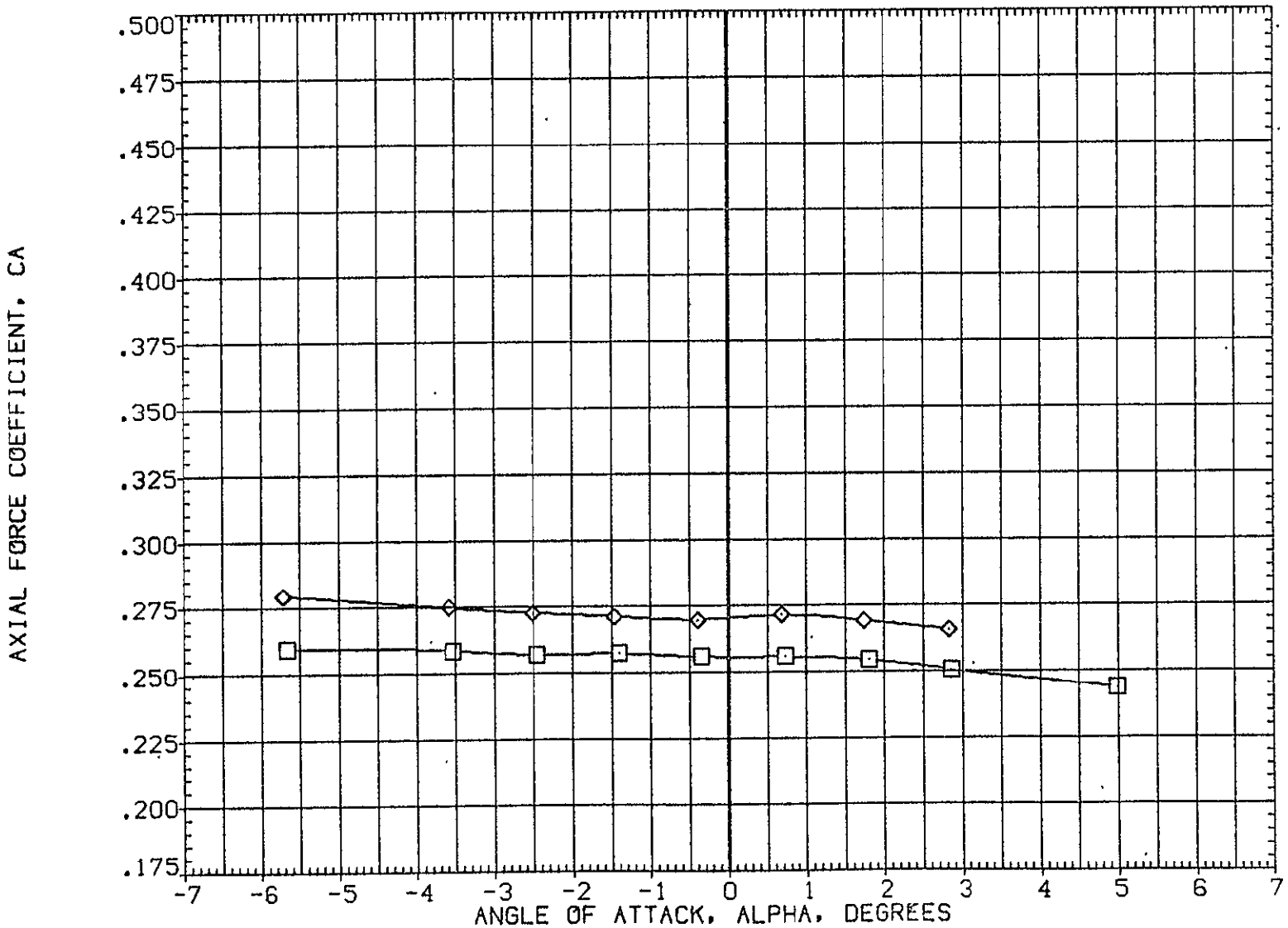
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)	DATA NOT AVAILABLE					
(AILO14)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

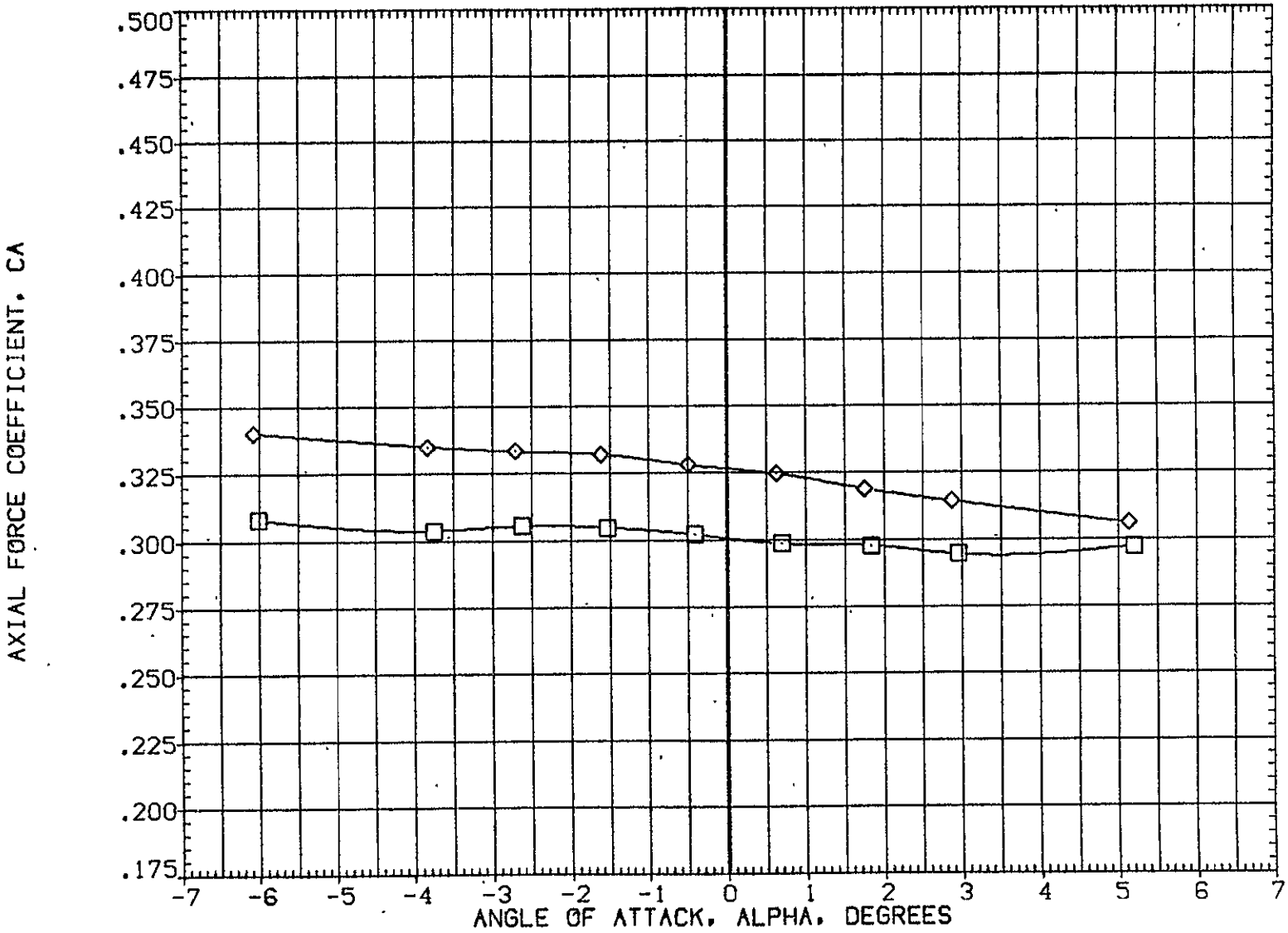


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L013)	○	DATA NOT AVAILABLE					
(A1L014)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

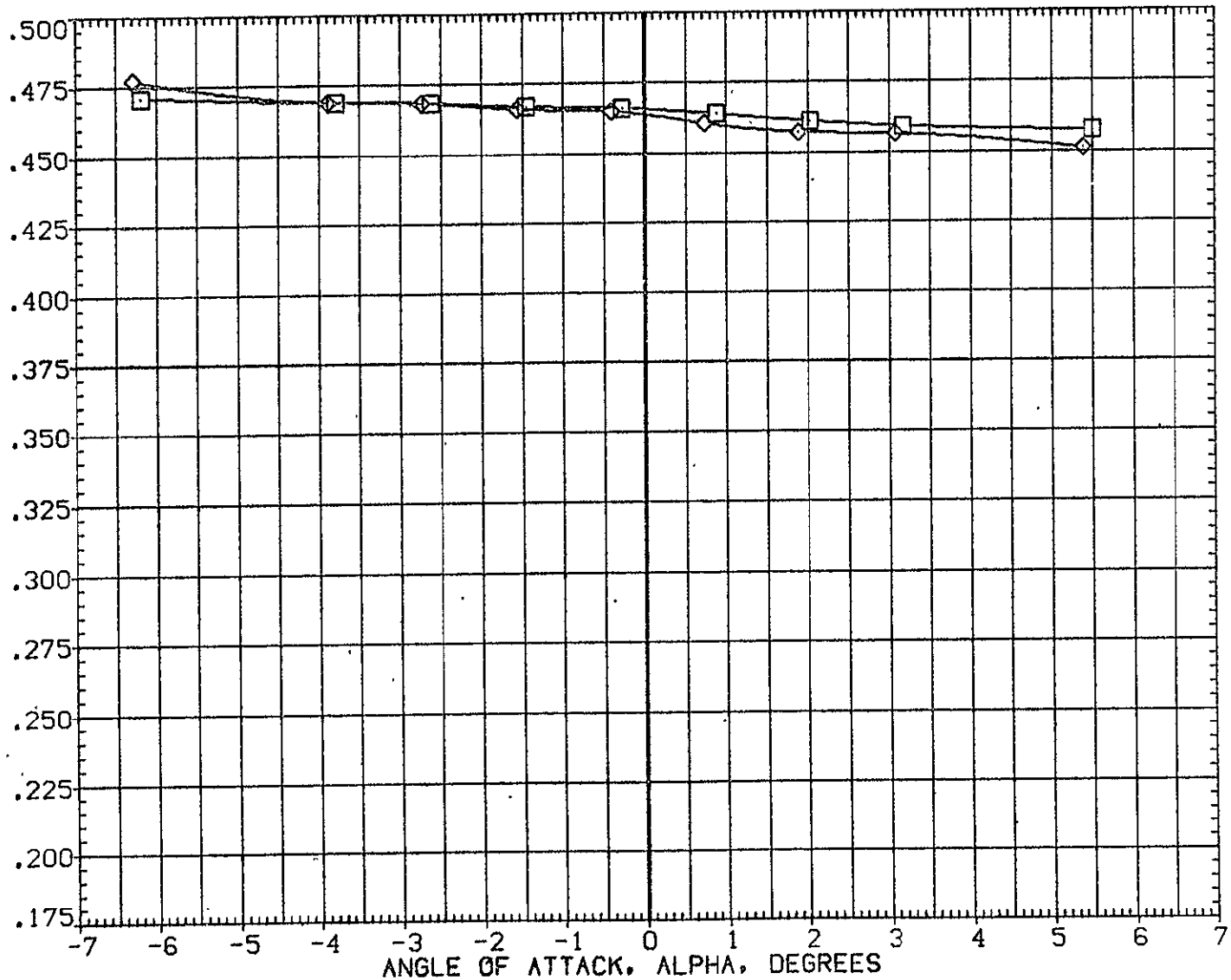


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)	DATA NOT AVAILABLE					
(AILO14)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



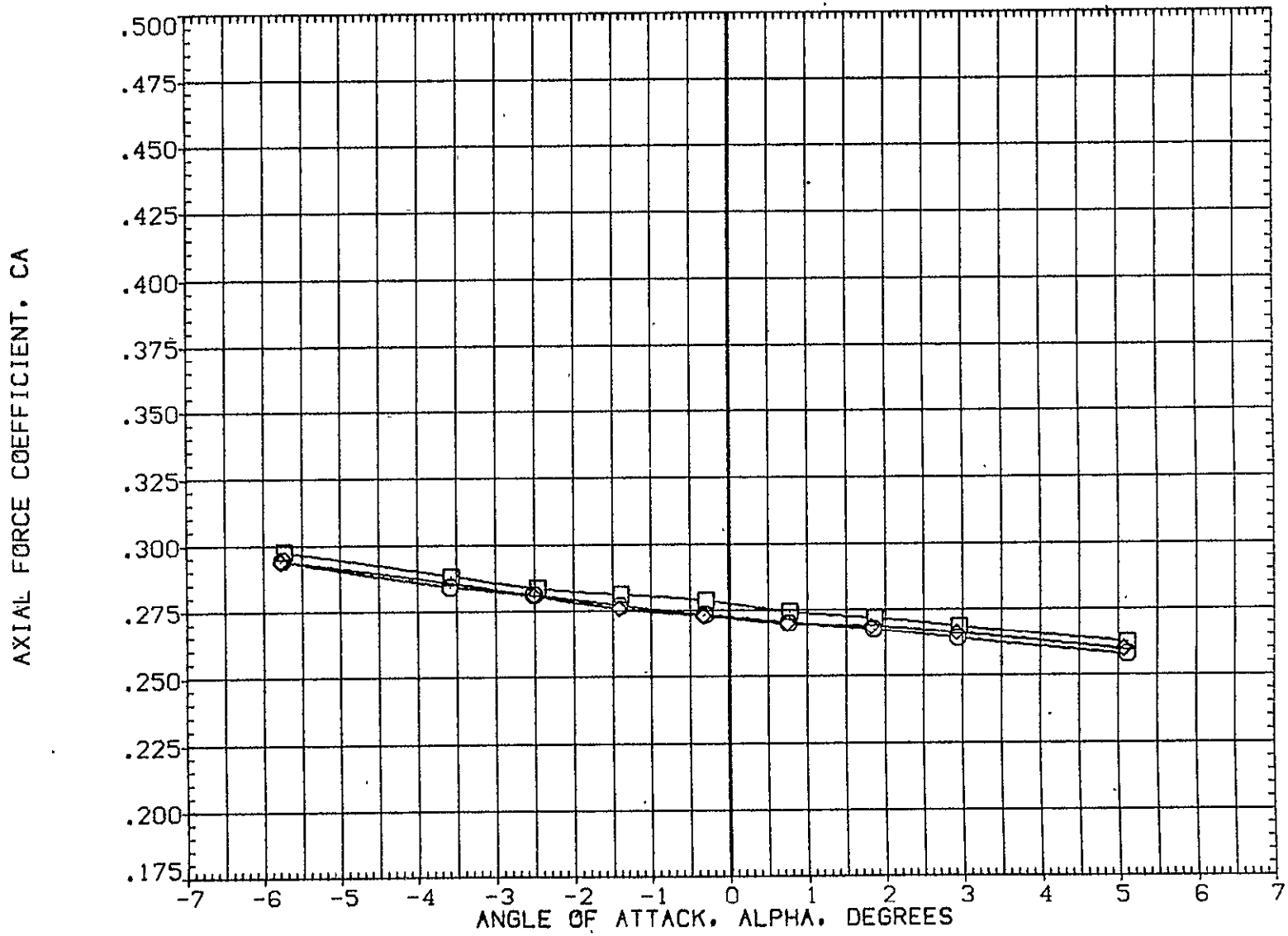
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L013)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(A1L014)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

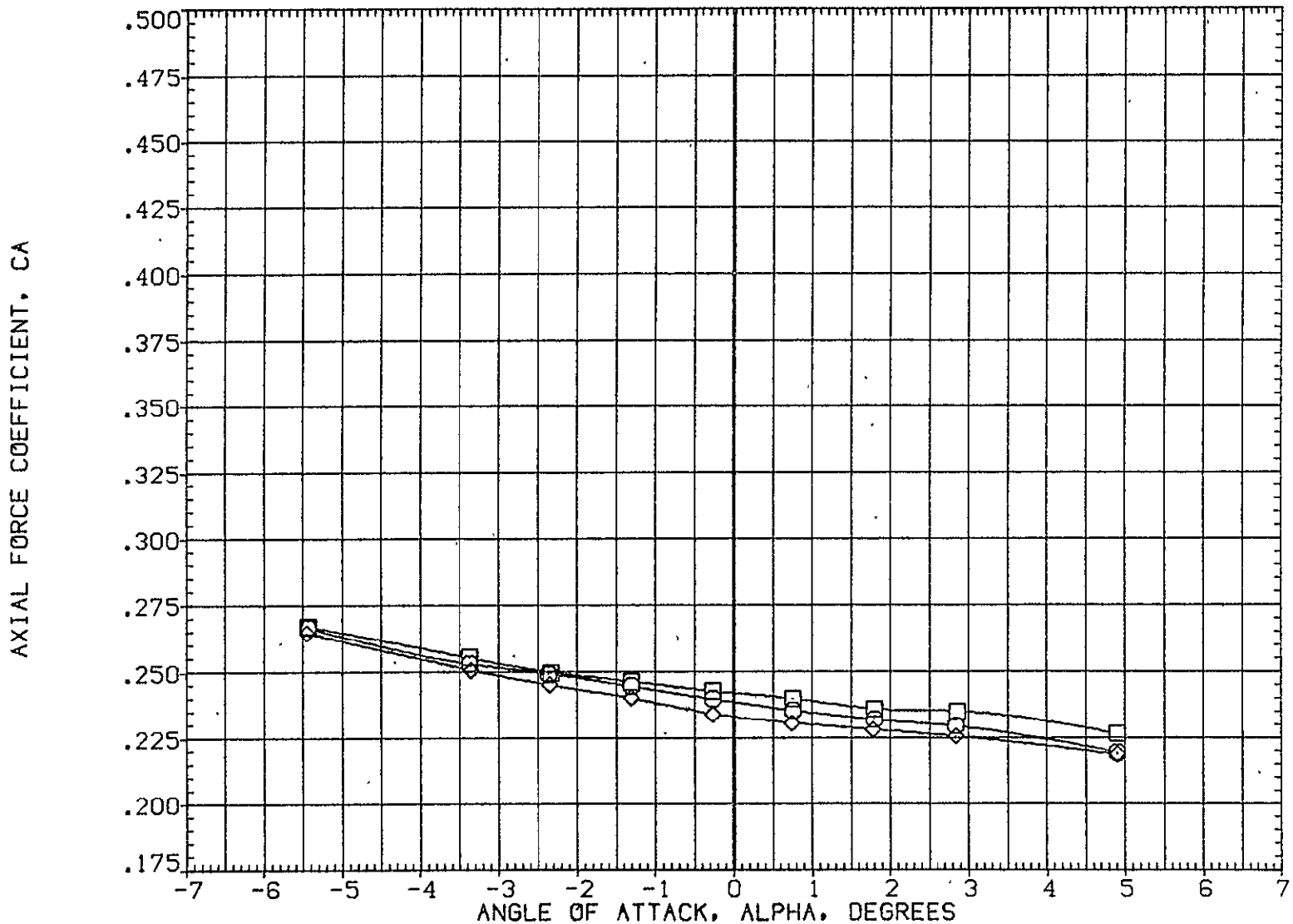


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILØ13)		MSFC TWT 600 (FA14)	ØITISIAIRIKIF13	.000	.000	90.000	.140
(AILØ14)		MSFC TWT 600 (FA14)	ØITISIAIRIKIF14	.000	.000	90.000	.140
(AILØ15)		MSFC TWT 600 (FA14)	ØITISIAIRIKIF17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

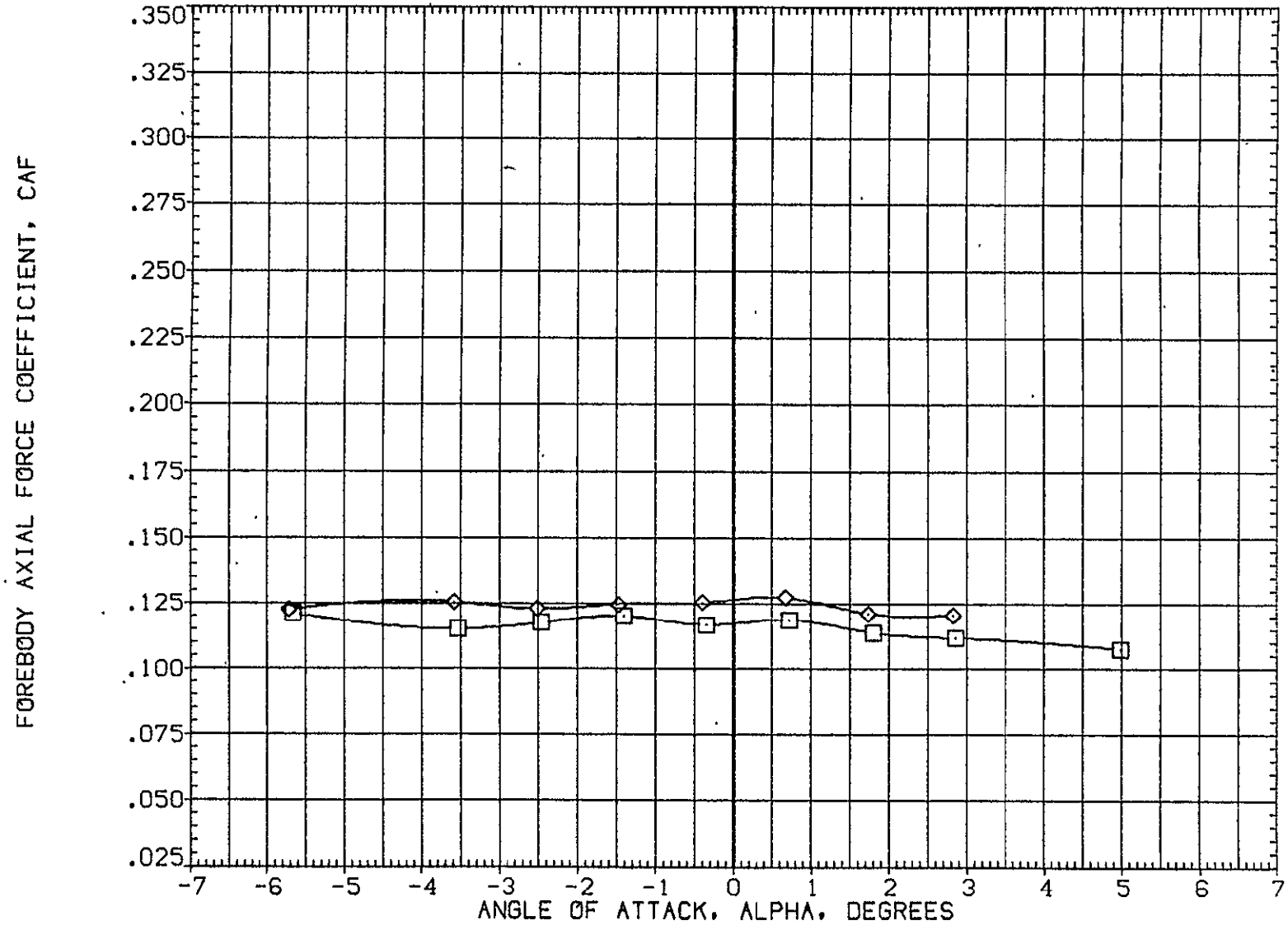


LØNGITUDINAL STABILITY AND DRAG CHARACTERISTICS ØF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L013) ○	DATA NOT AVAILABLE					
(A1L014) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

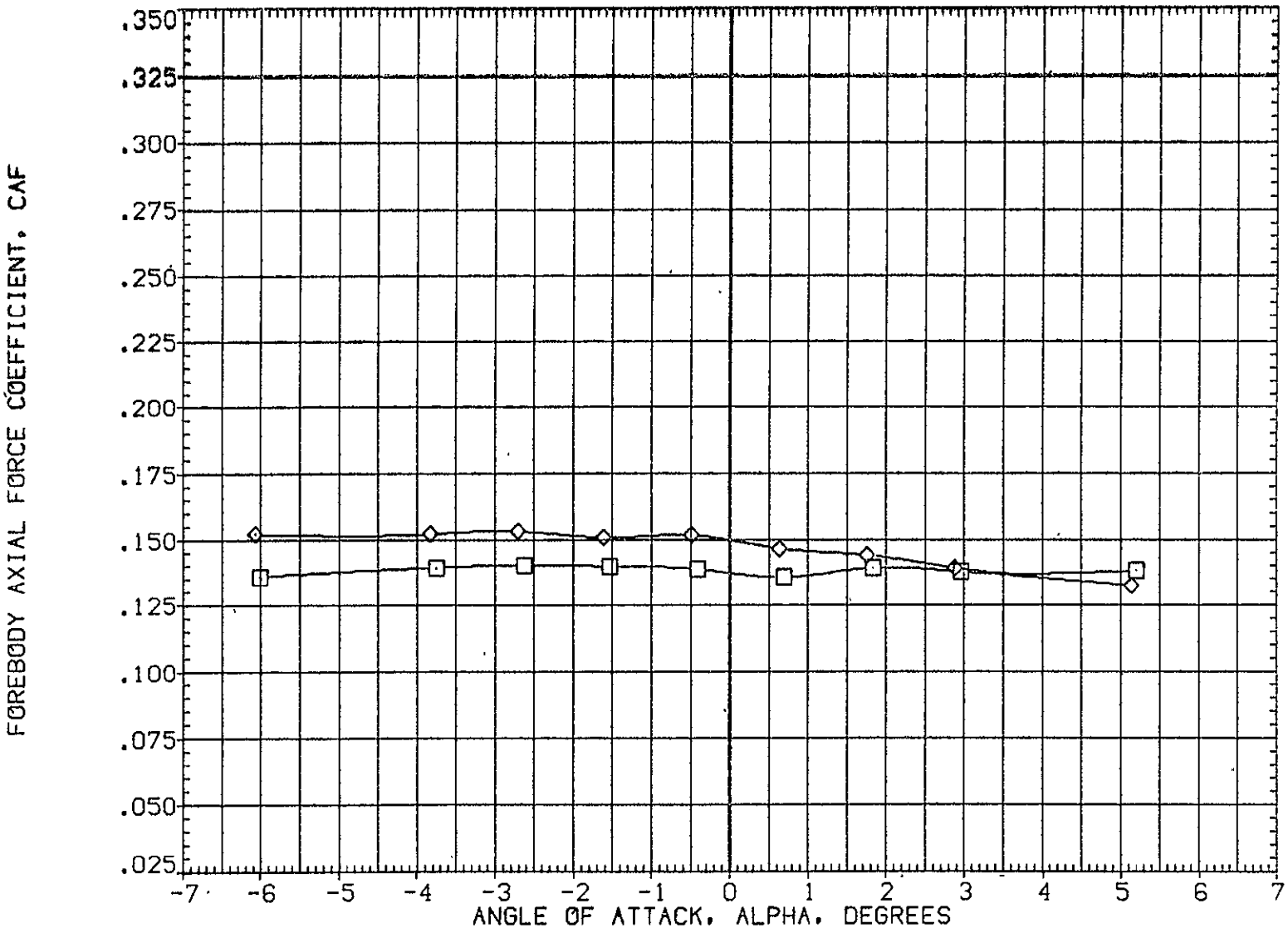


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13) ○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO14) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

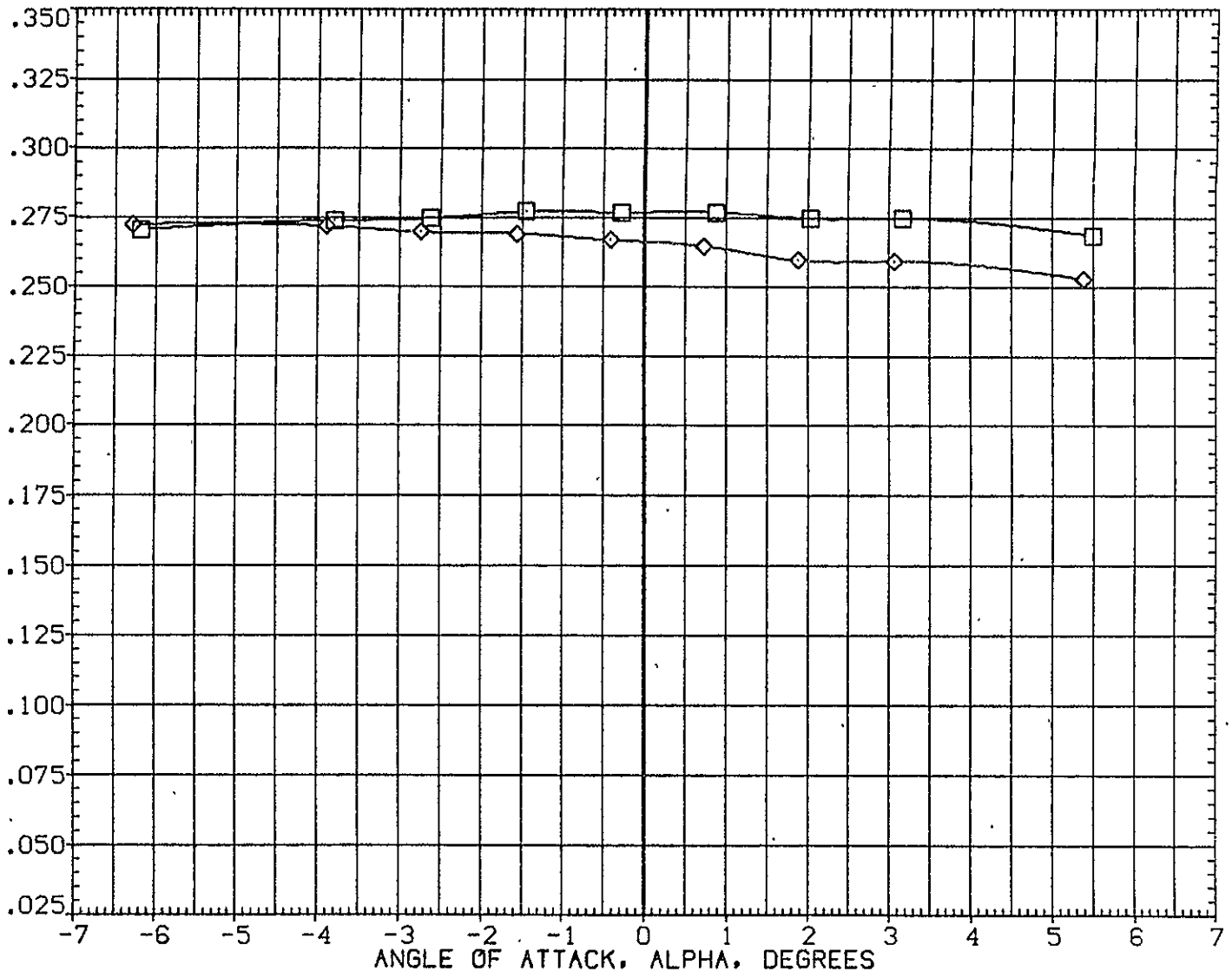


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO13)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO14)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(AILO15)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

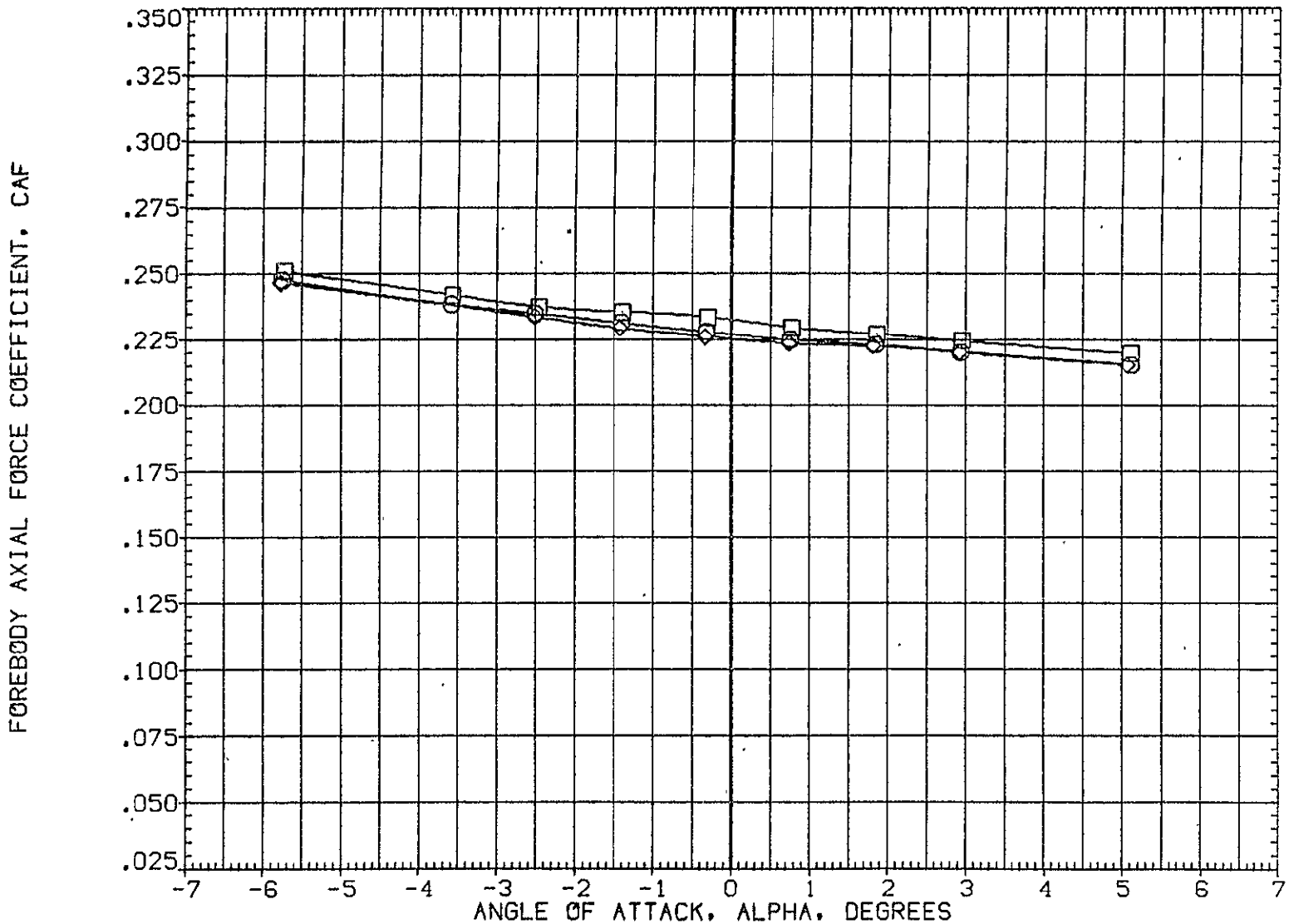


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO13)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(A1LO14)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1LO15)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

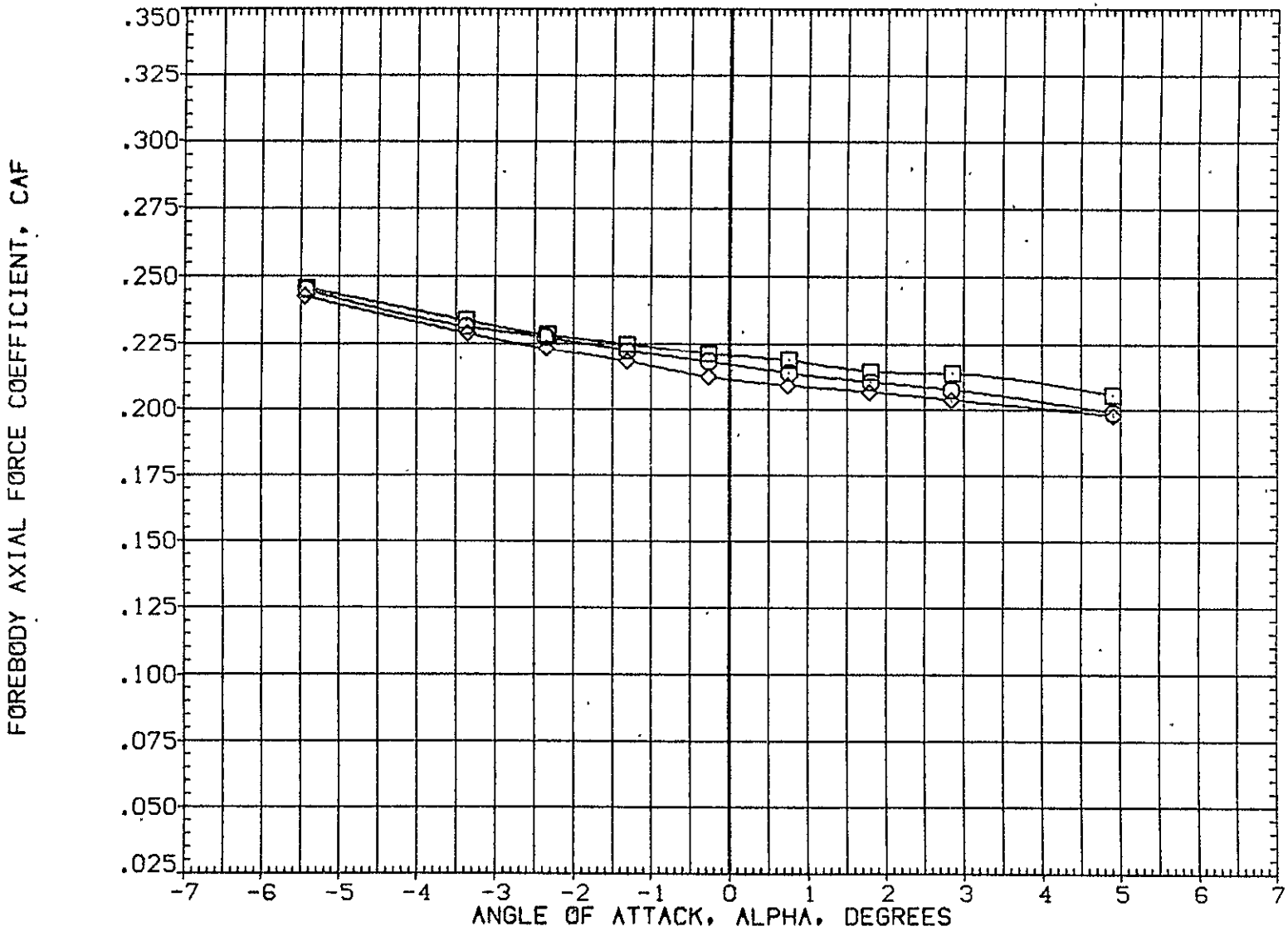


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO13)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(A1LO14)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1LO15)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

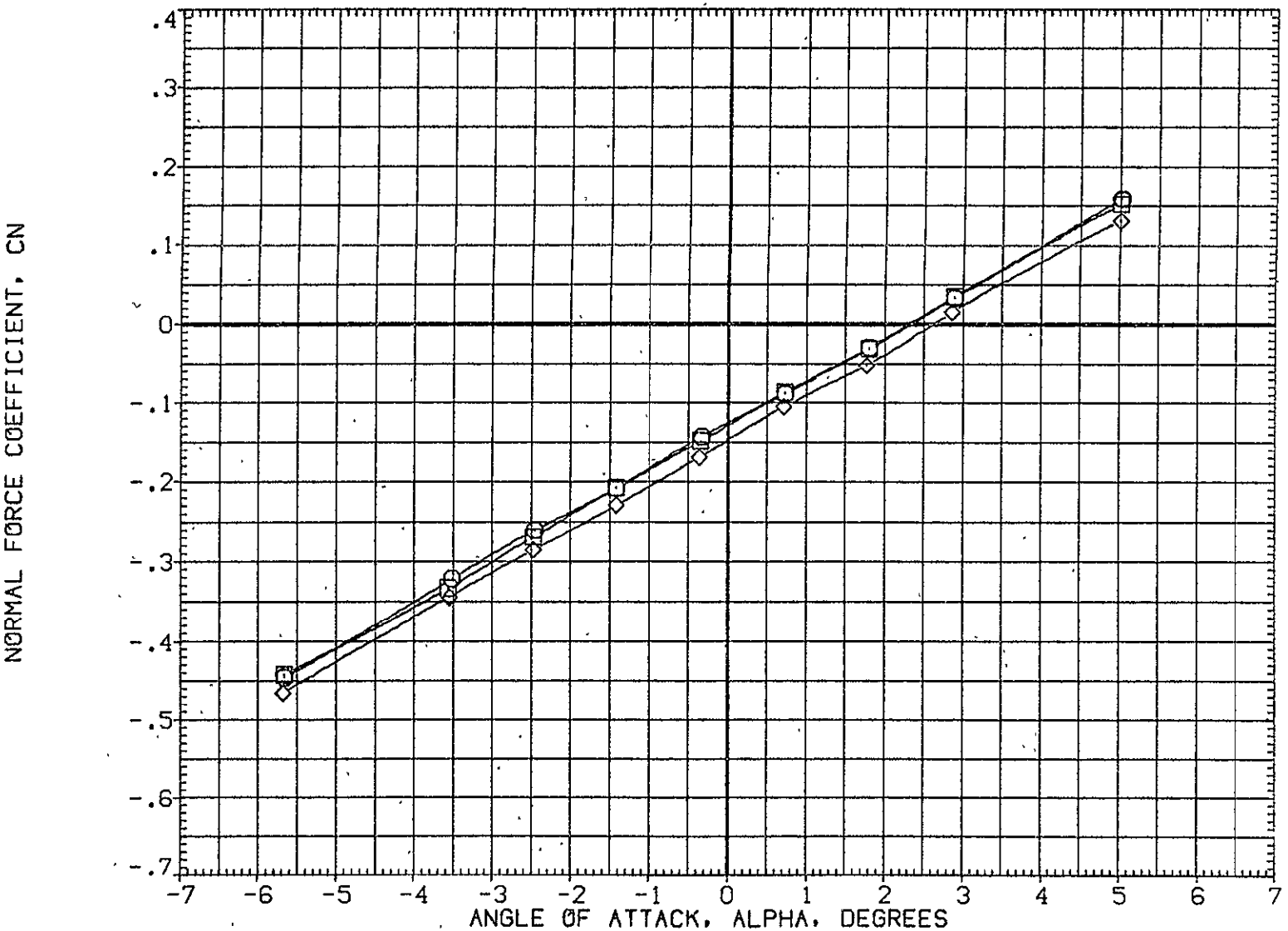


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO17)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1LO18)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

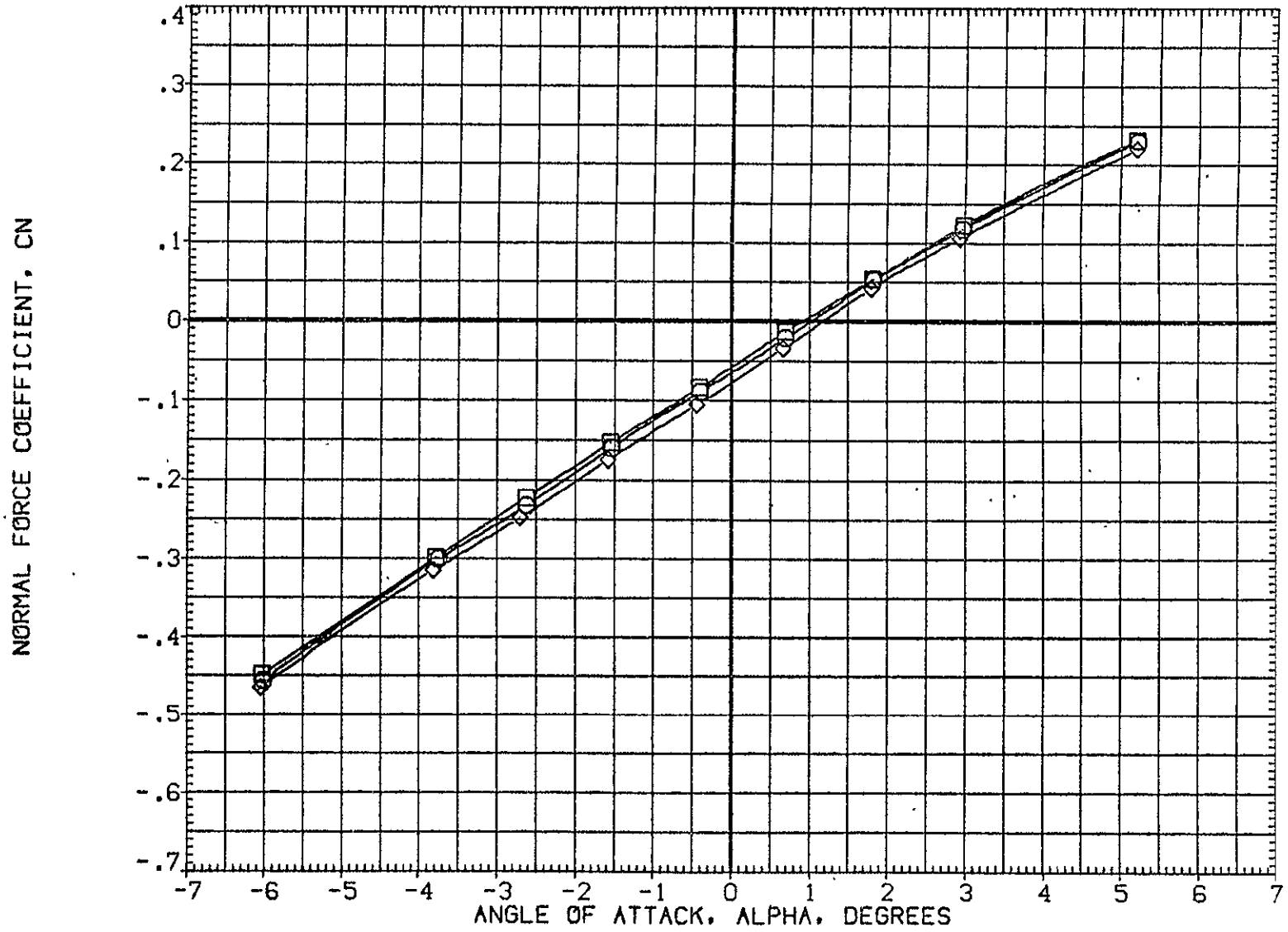


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO17)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1LO18)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



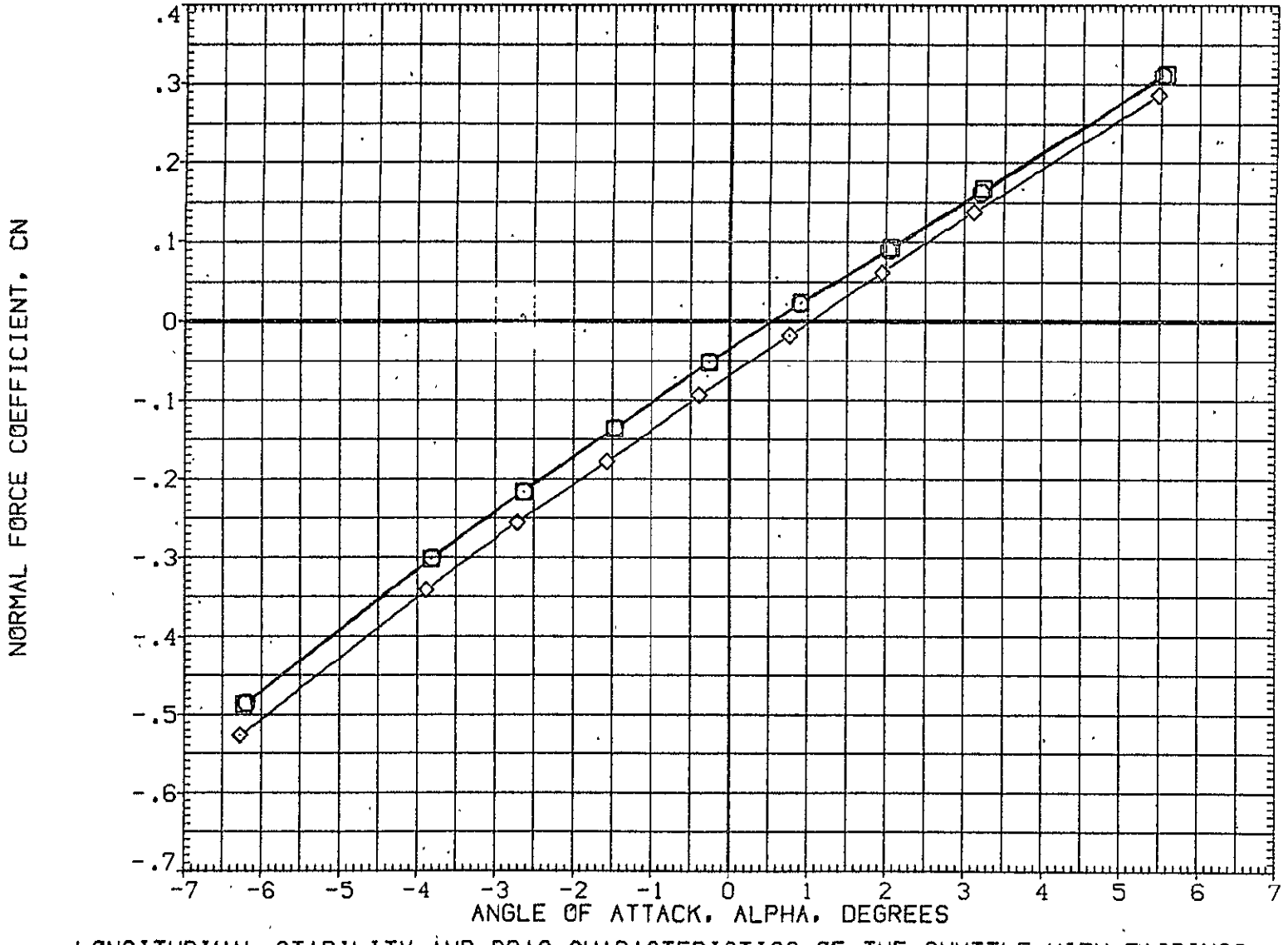
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1RIK1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1RIK1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1RIK1F12	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

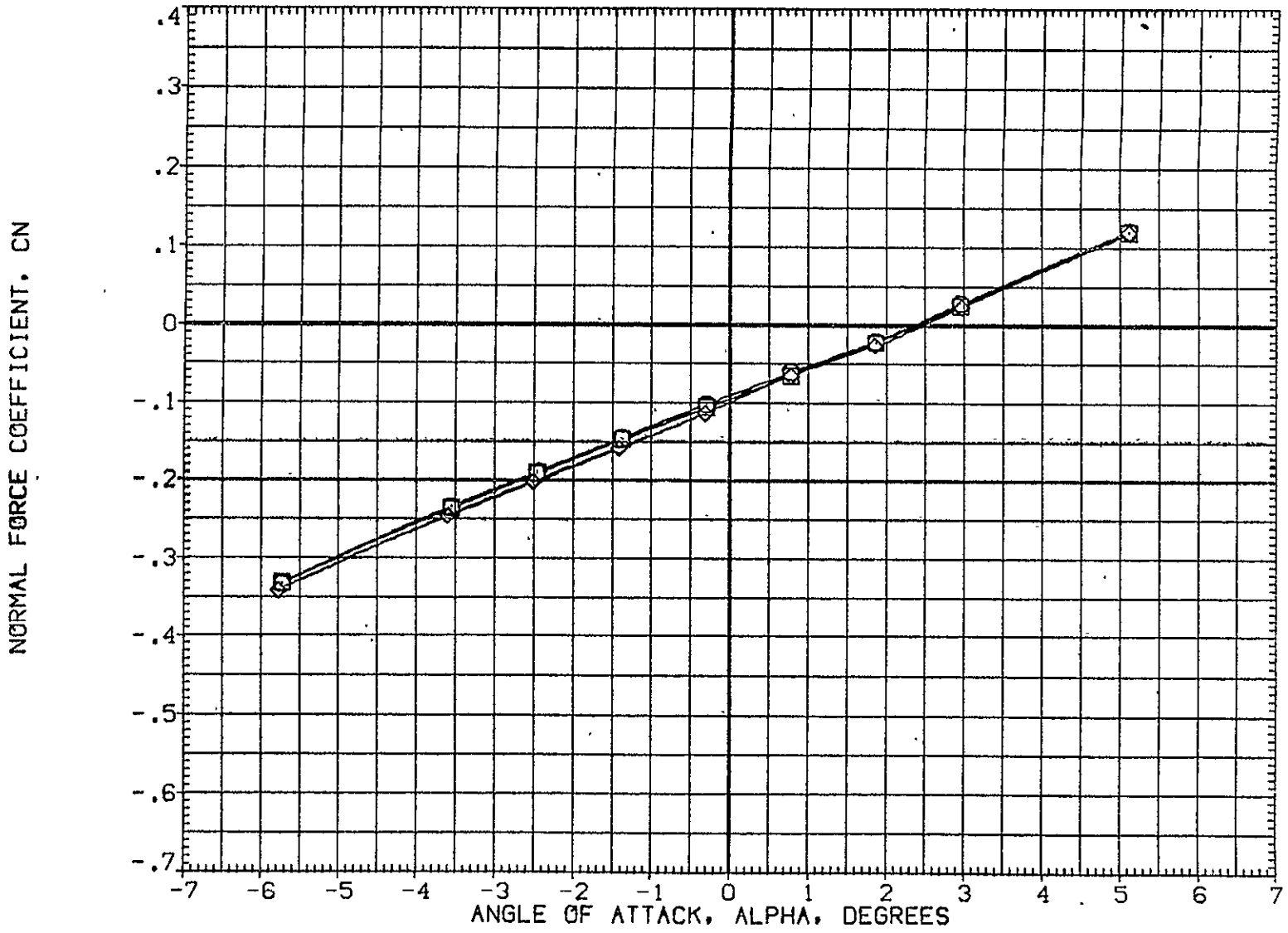


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

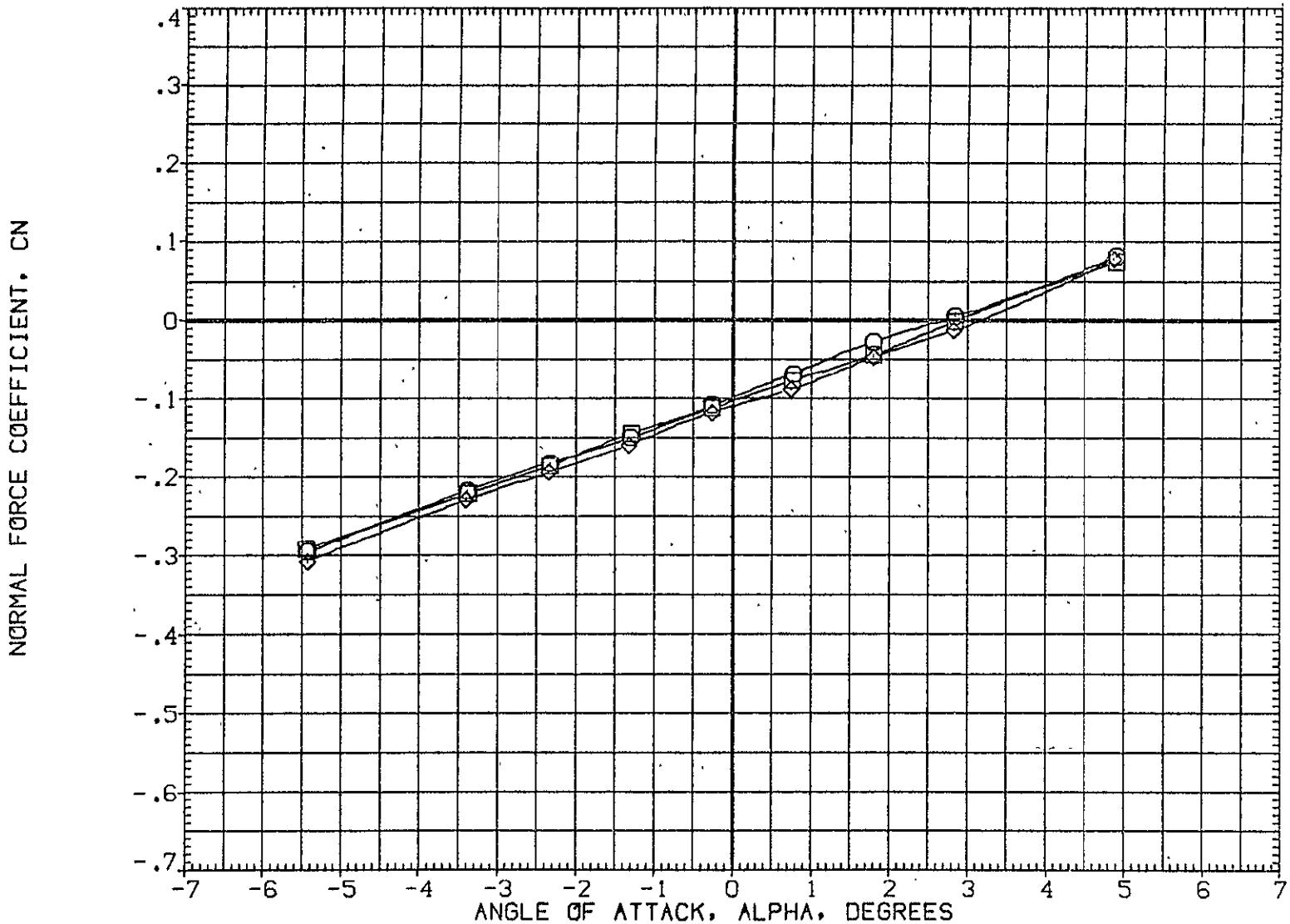


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	◁□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	-.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

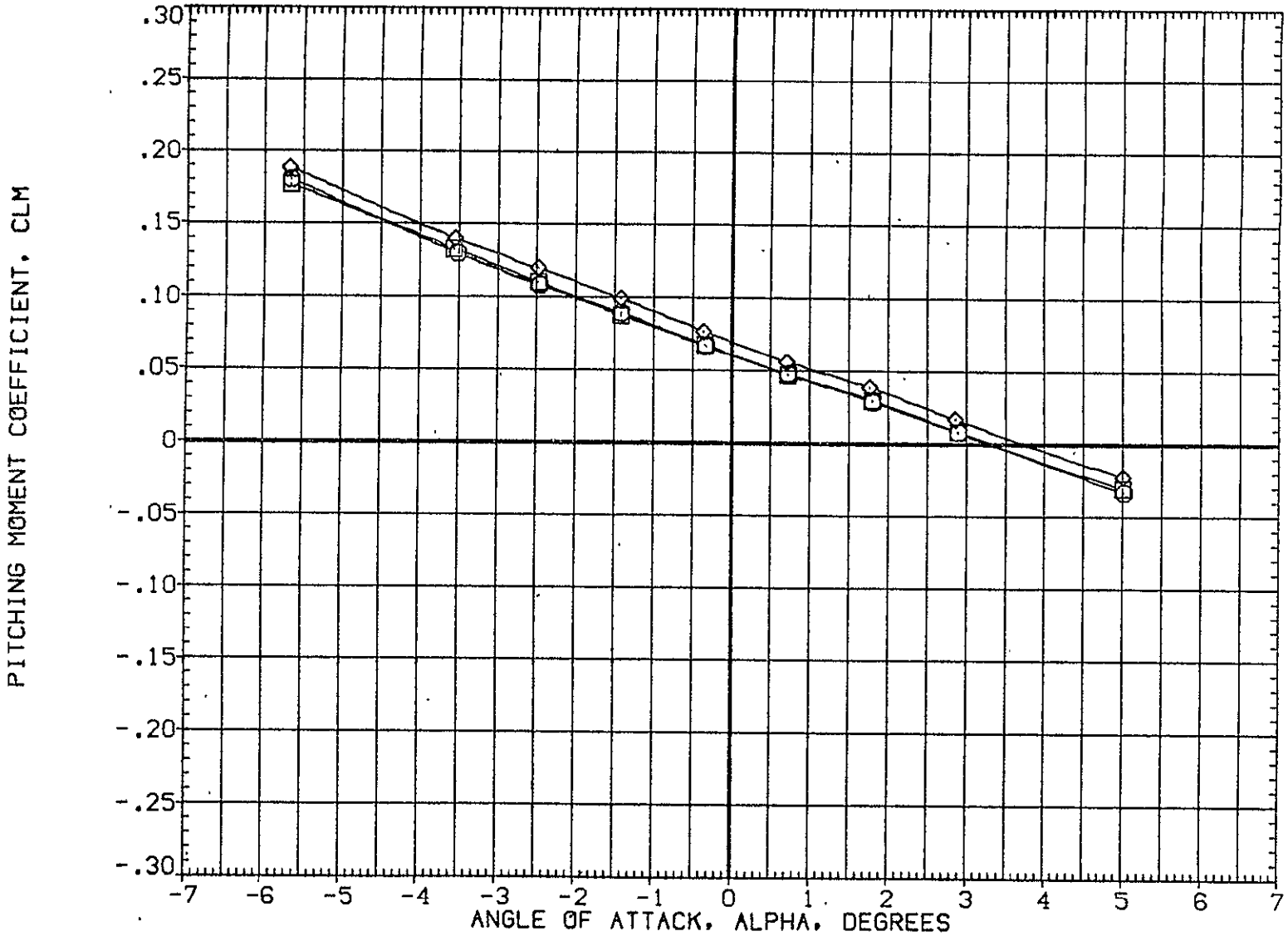


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A)LO16)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A)LO17)		MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A)LO18)		MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

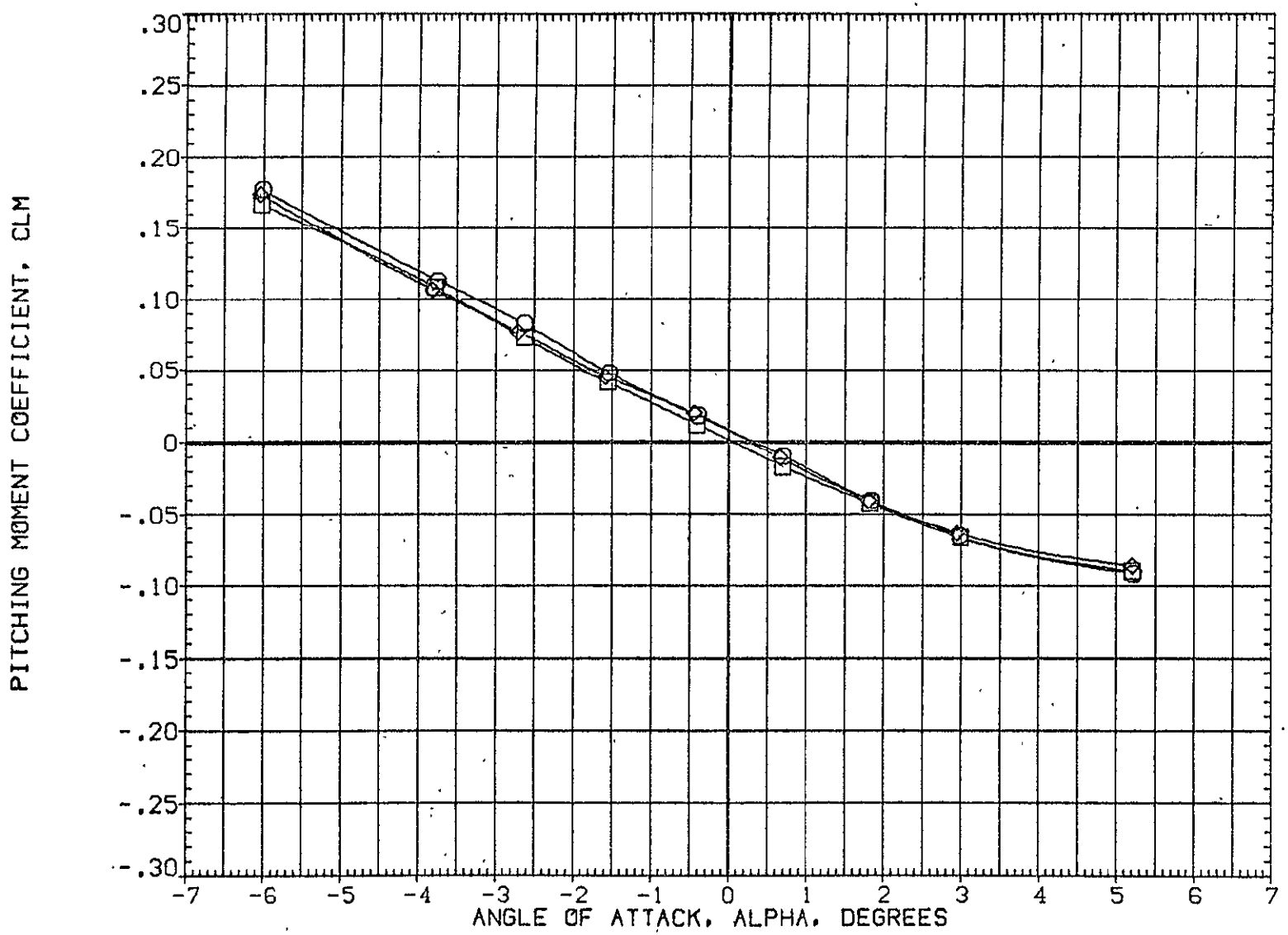


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

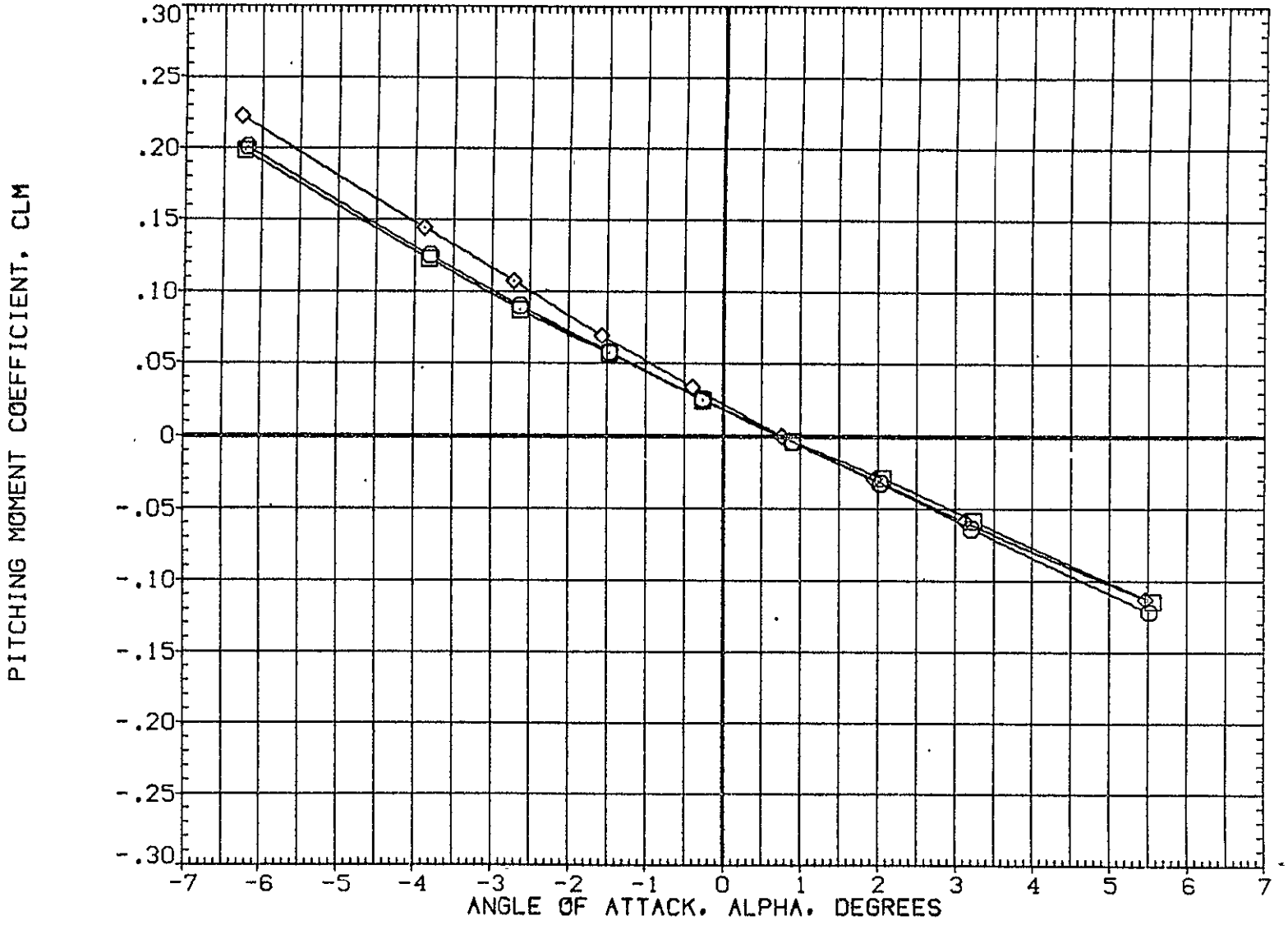


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01TIS1A1R1K1	.000	.000	90.000	.140
(AILO17)	□	MSFC TWT 600 (FA14)	01TIS2A1R1K1	.000	.000	90.000	.140
(AILO18)	◇	MSFC TWT 600 (FA14)	01TIS2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

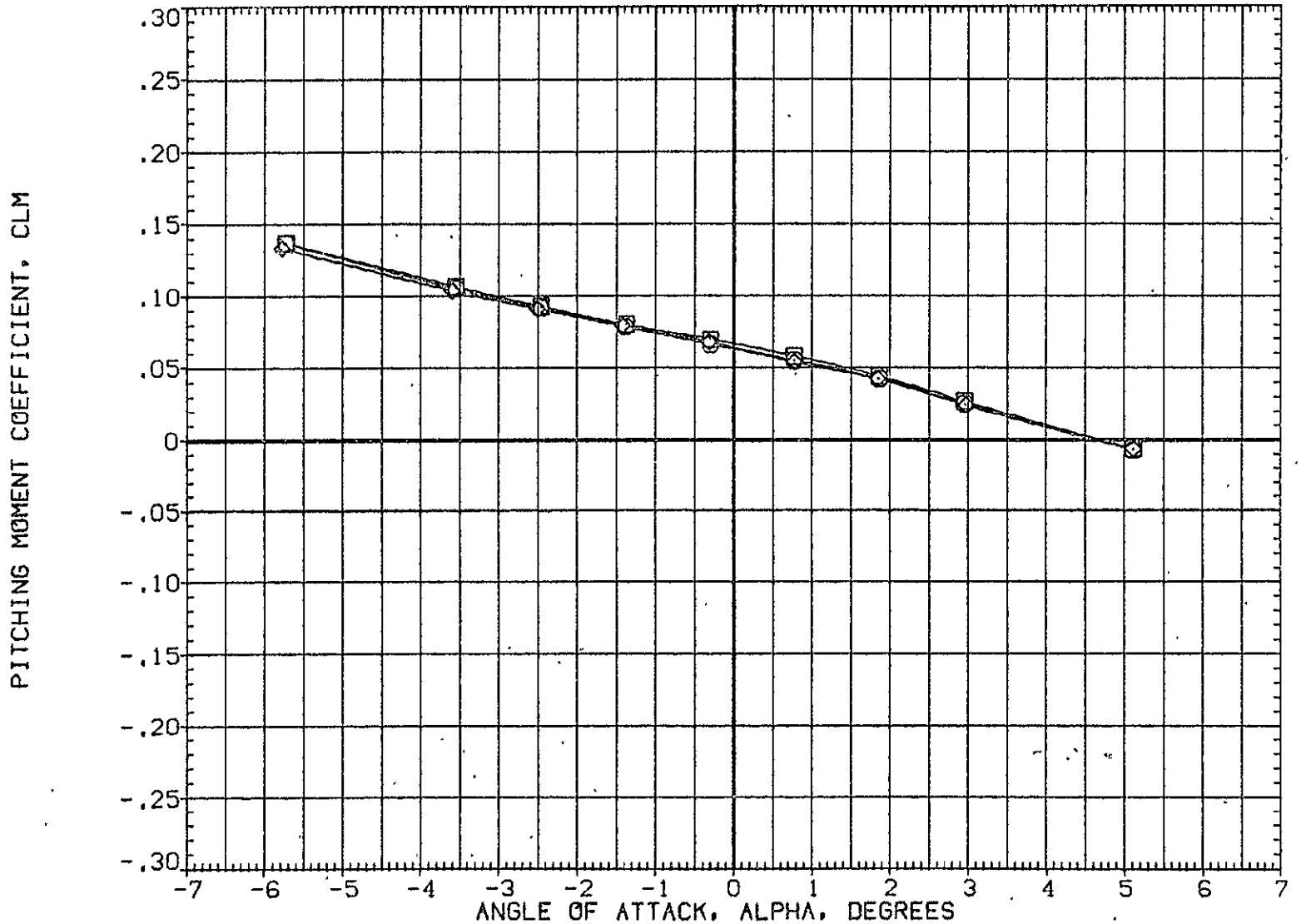


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

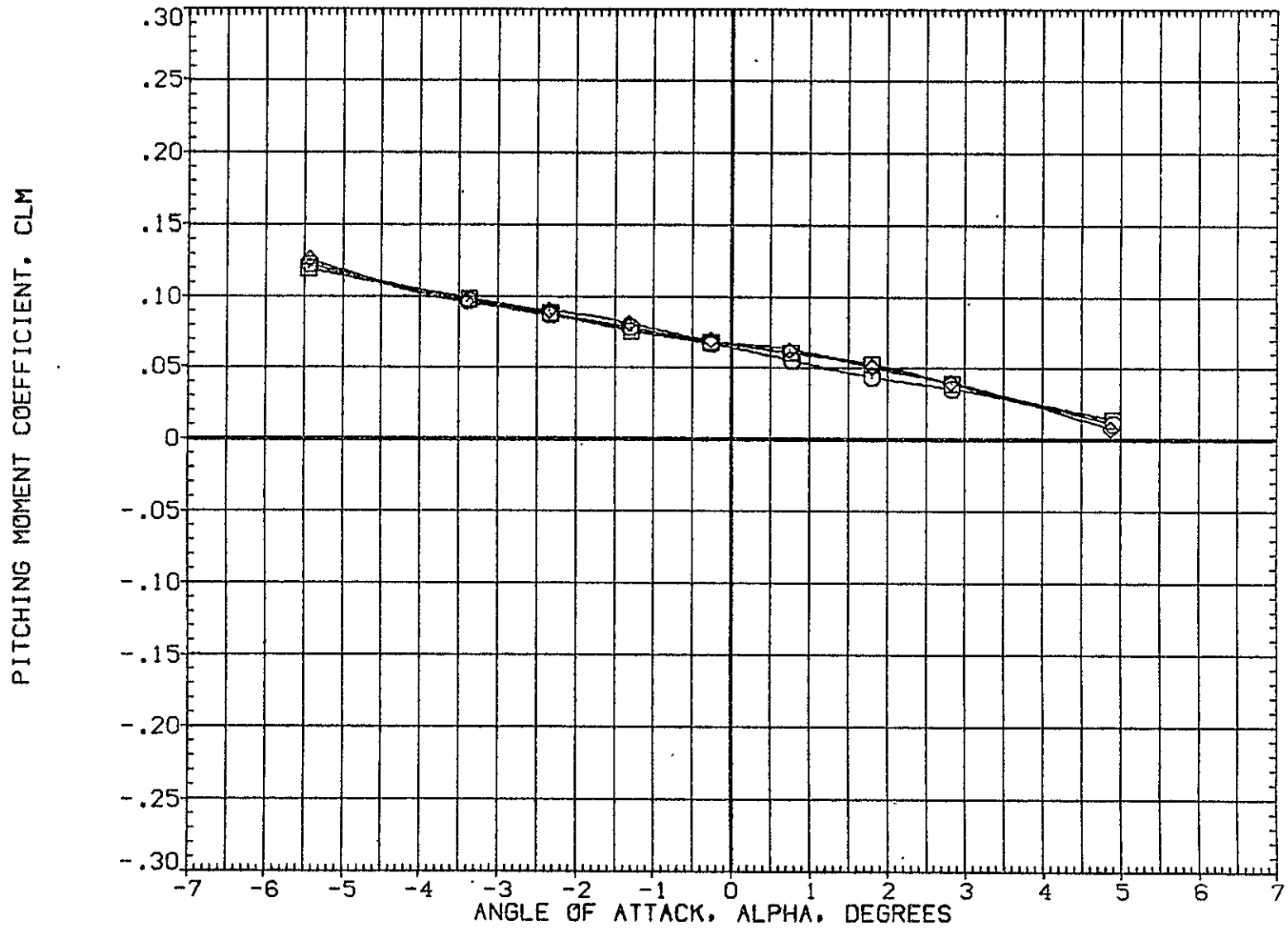


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION.		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



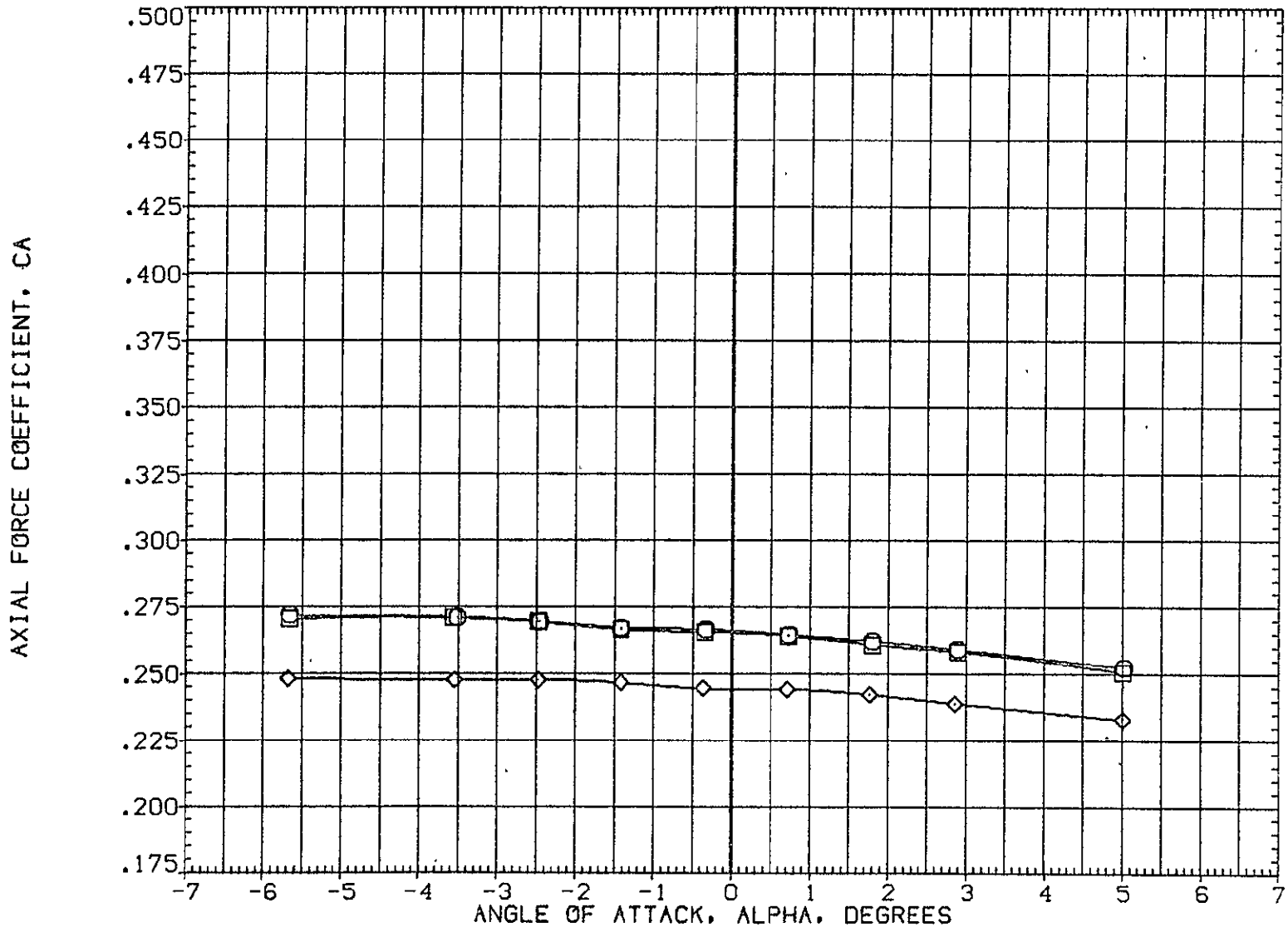
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

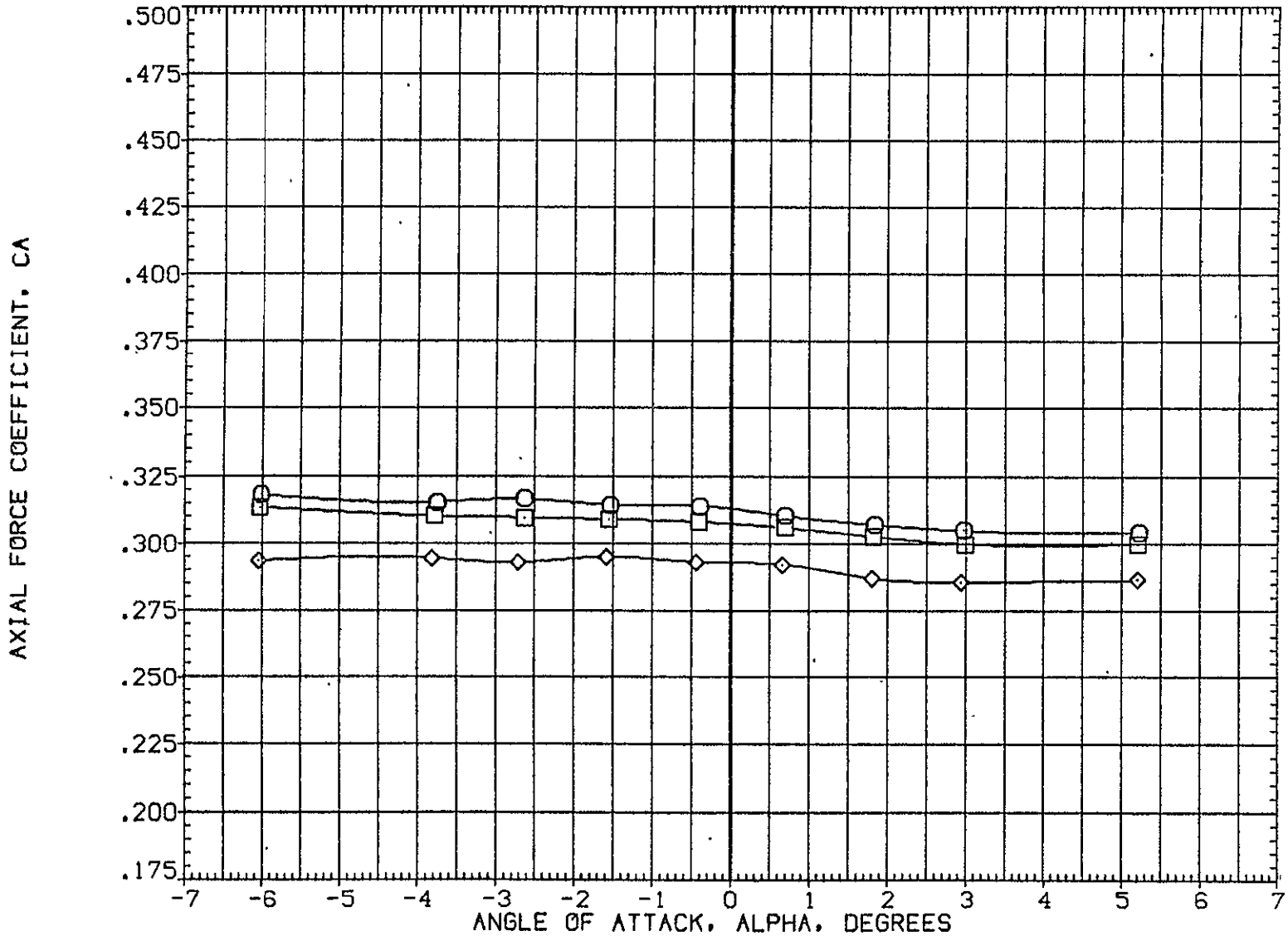


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO17)		MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1LO18)		MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

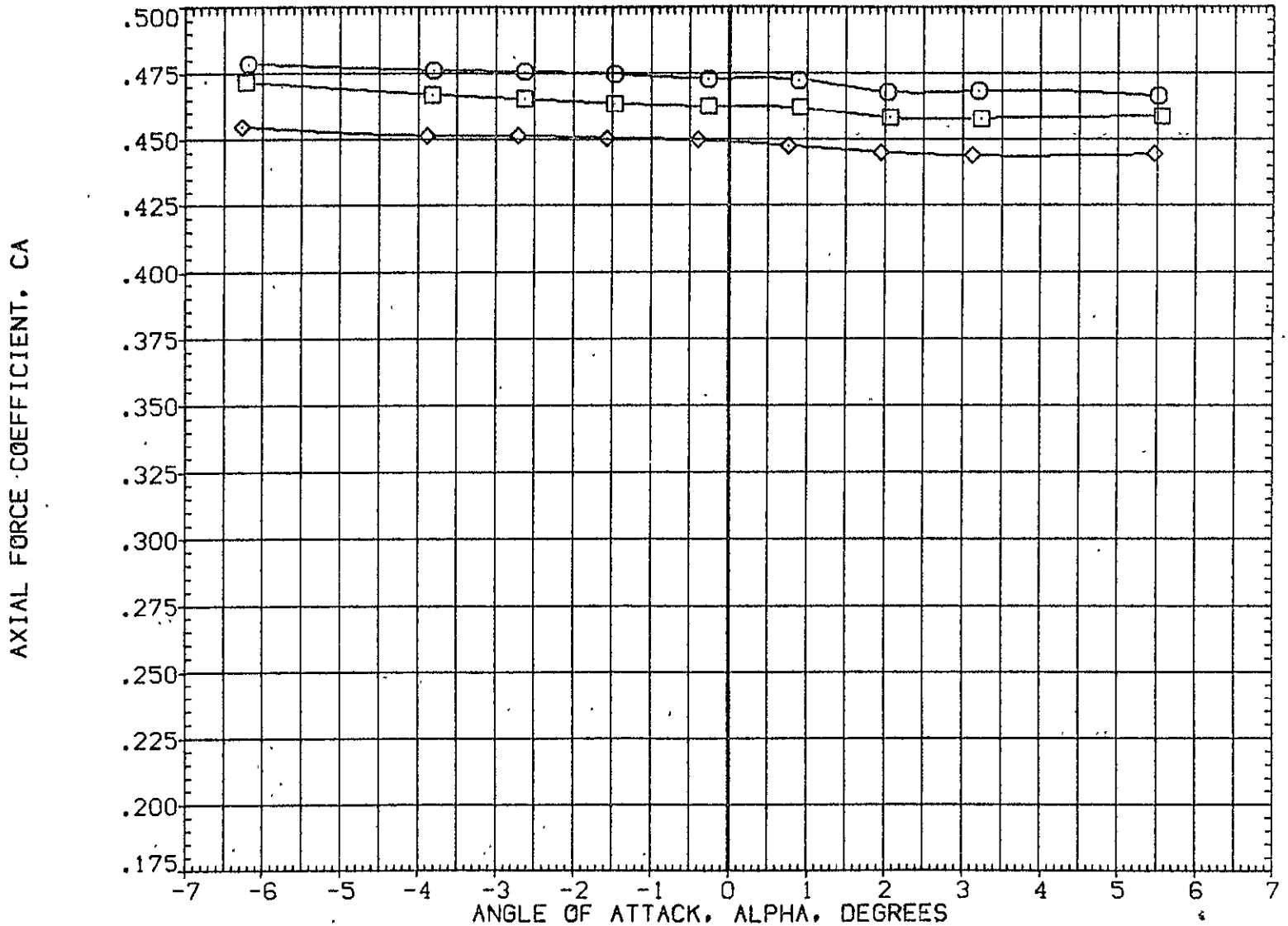


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

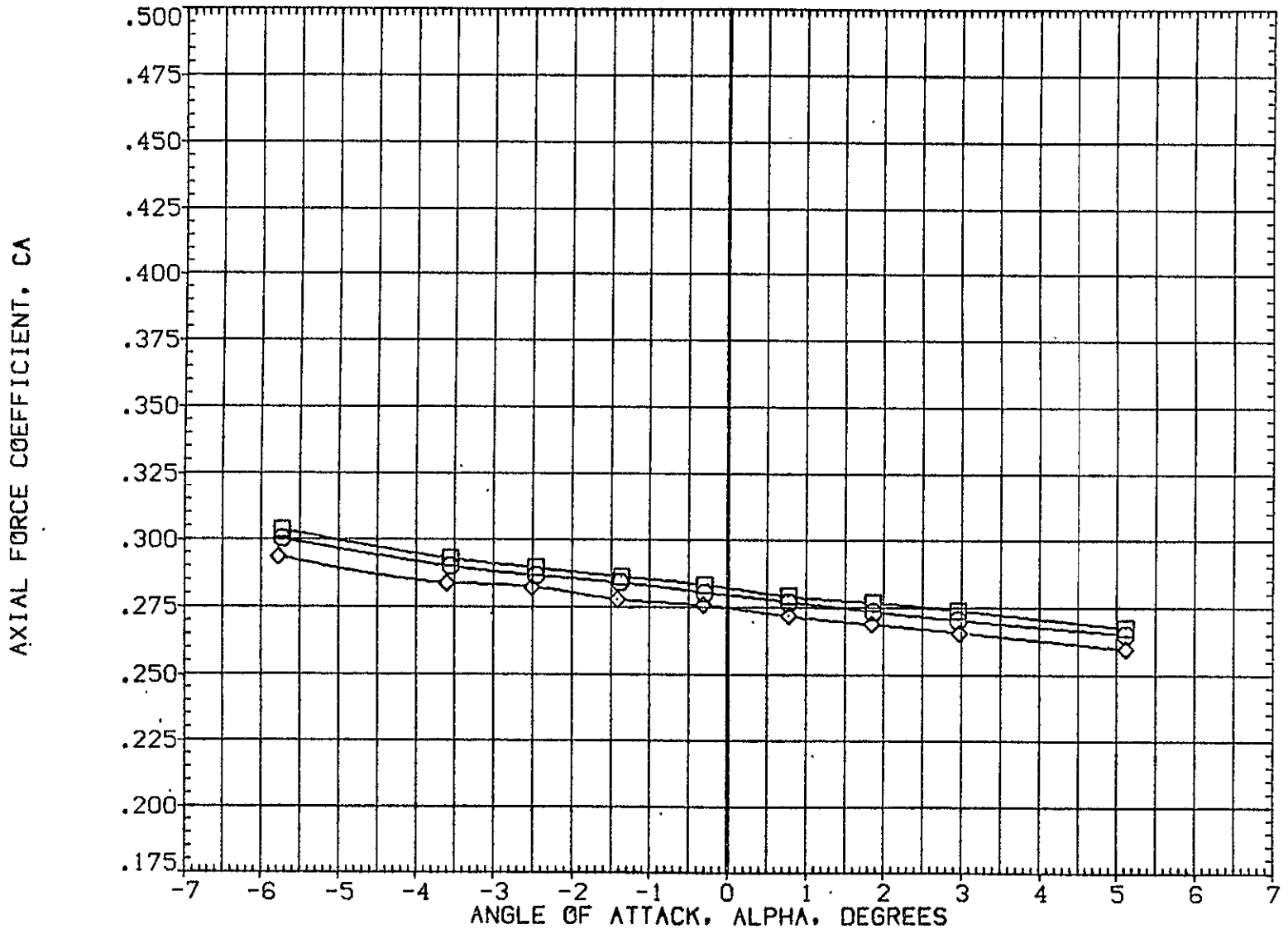


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	▭	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	▭	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



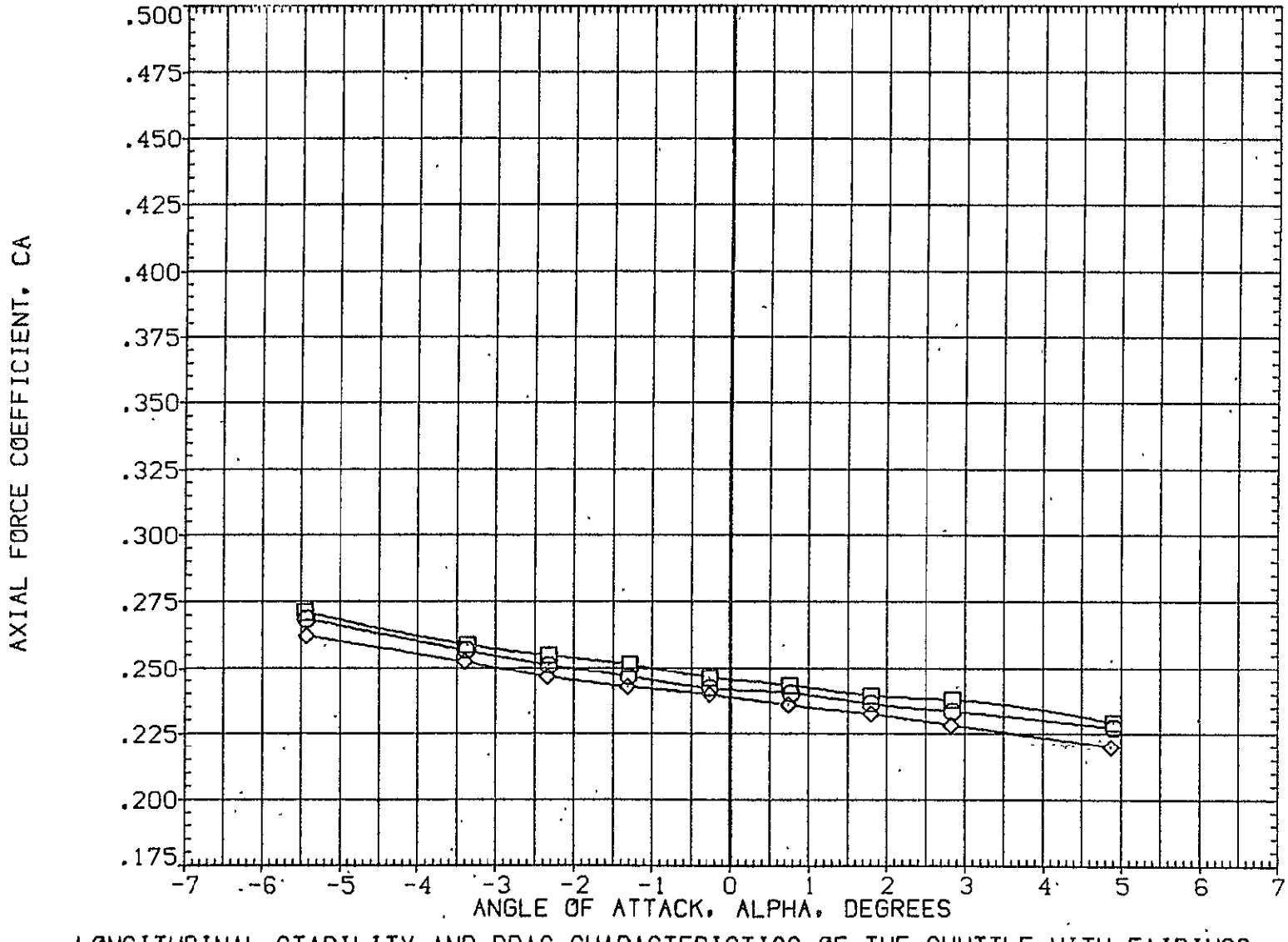
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	▭	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	▭	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

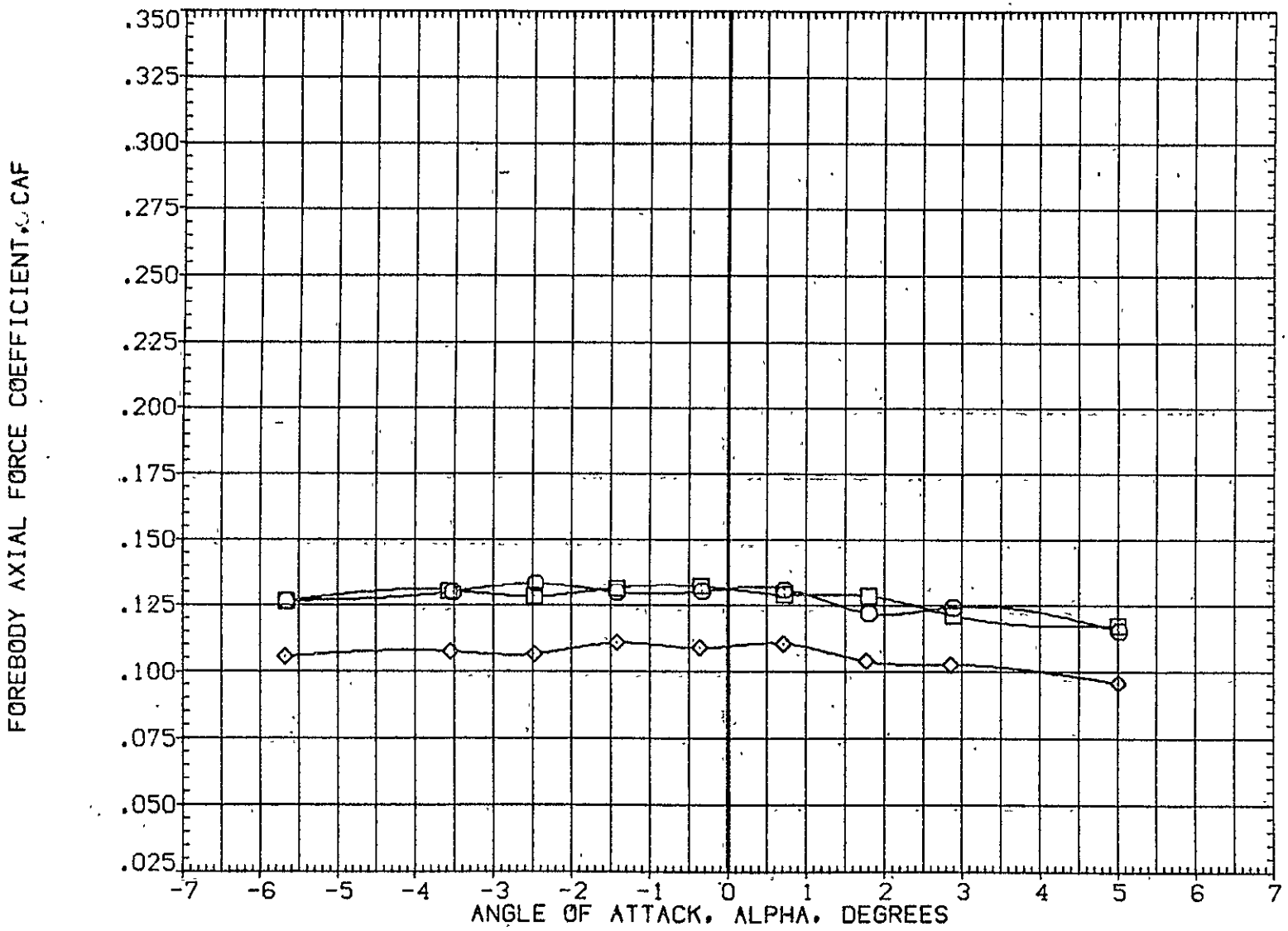


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO17)	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1LO18)	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

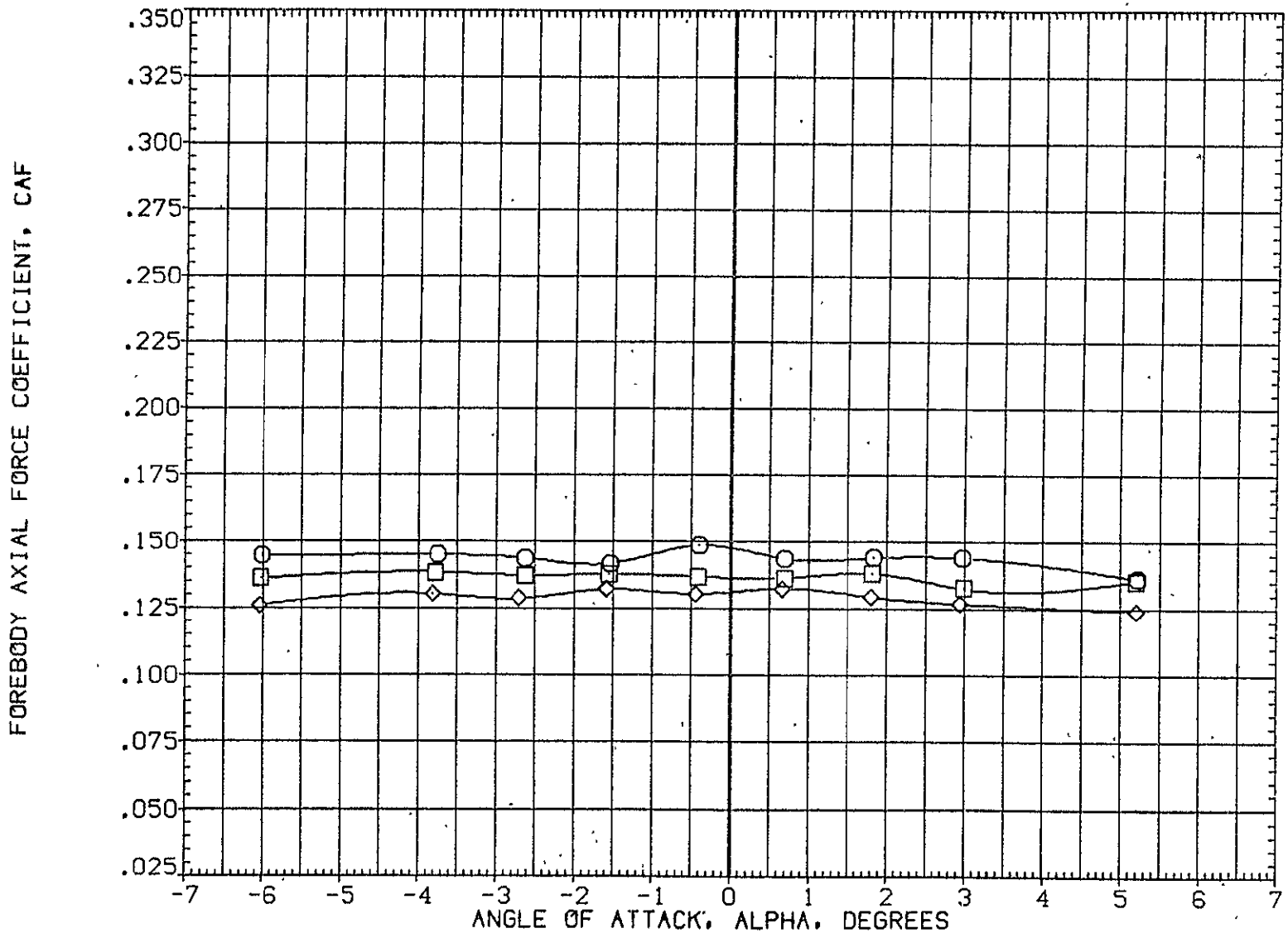


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

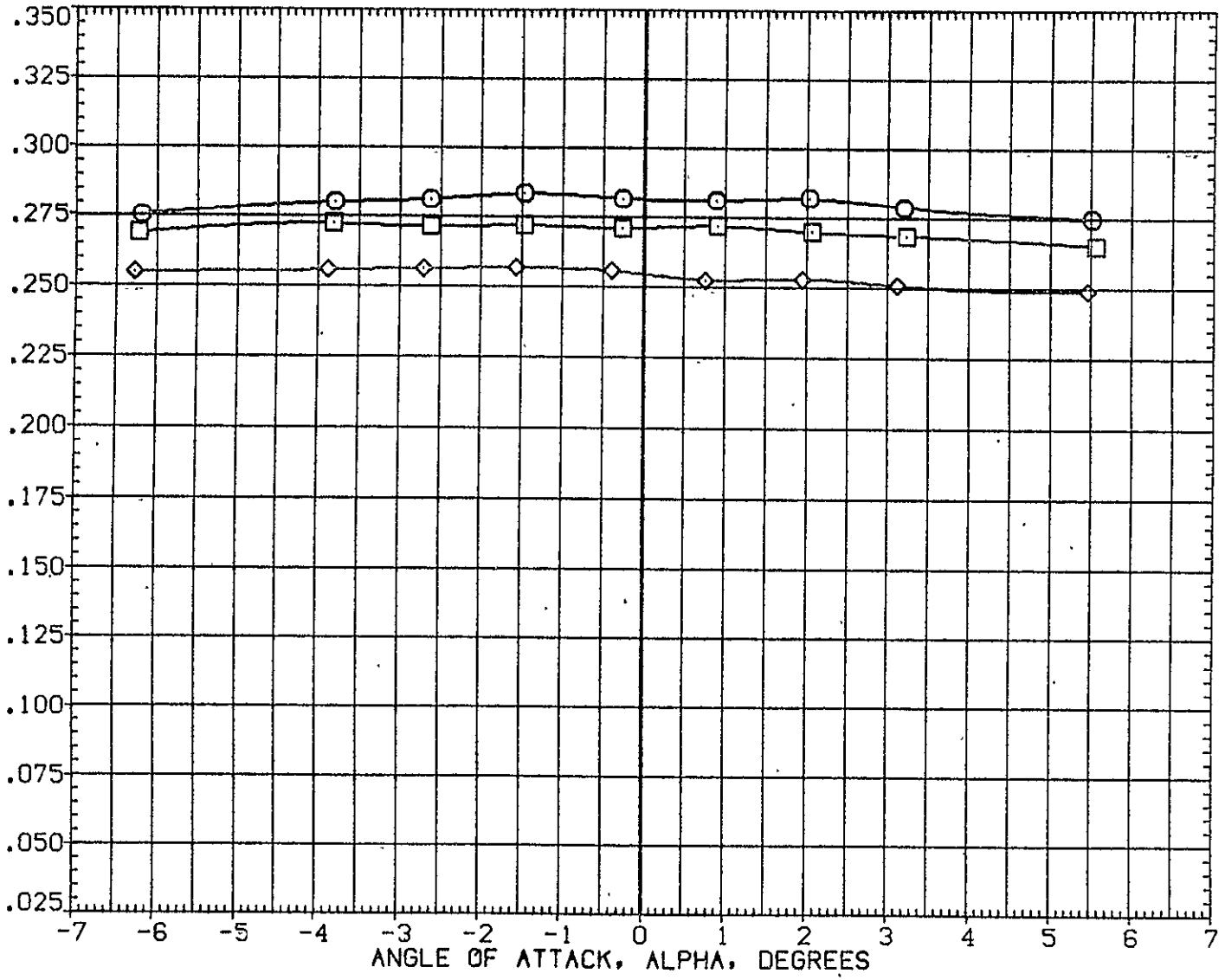


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(AILO17)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(AILO18)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



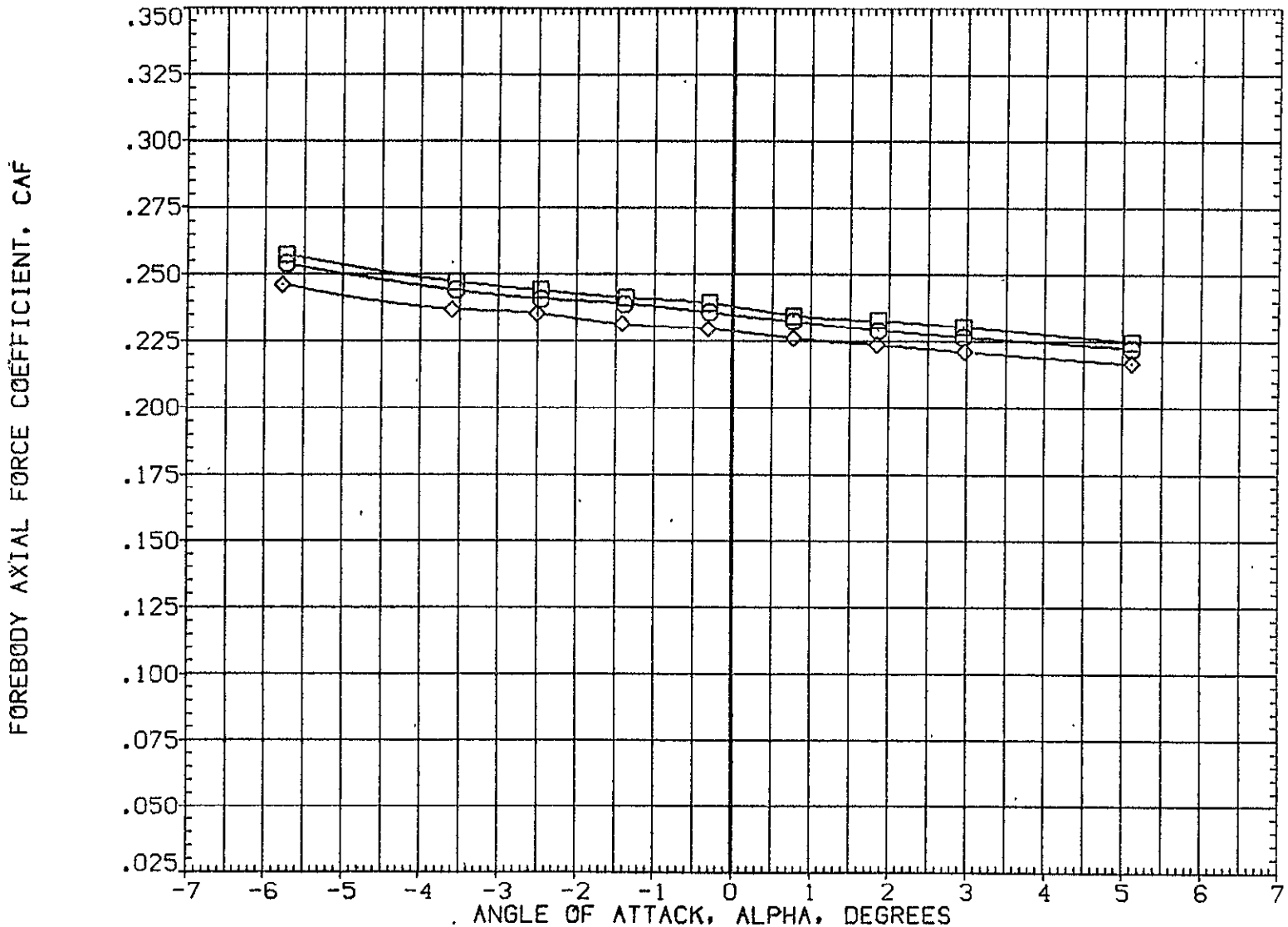
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(AILO17)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(AILO18)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

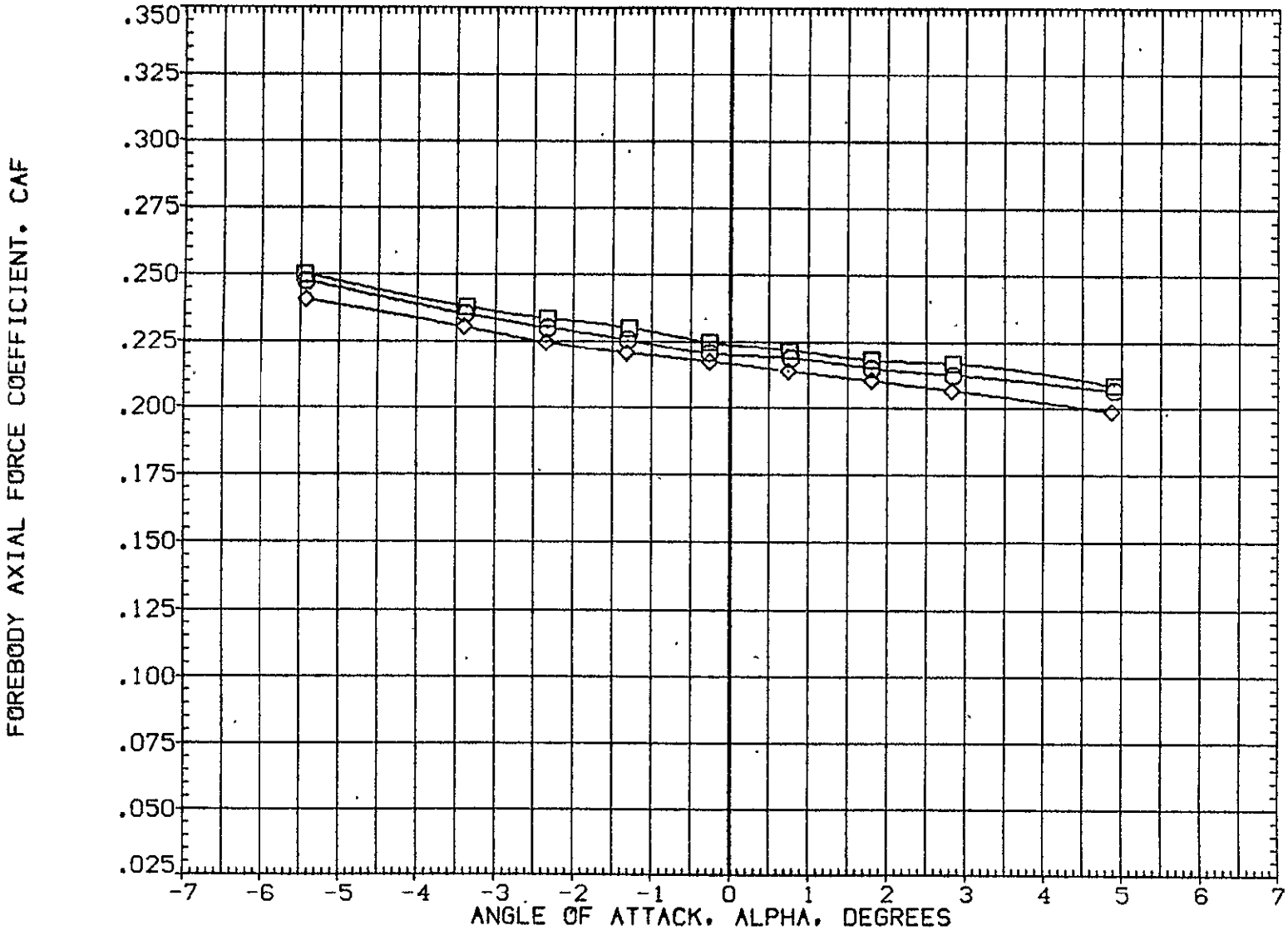


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)		MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)		MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

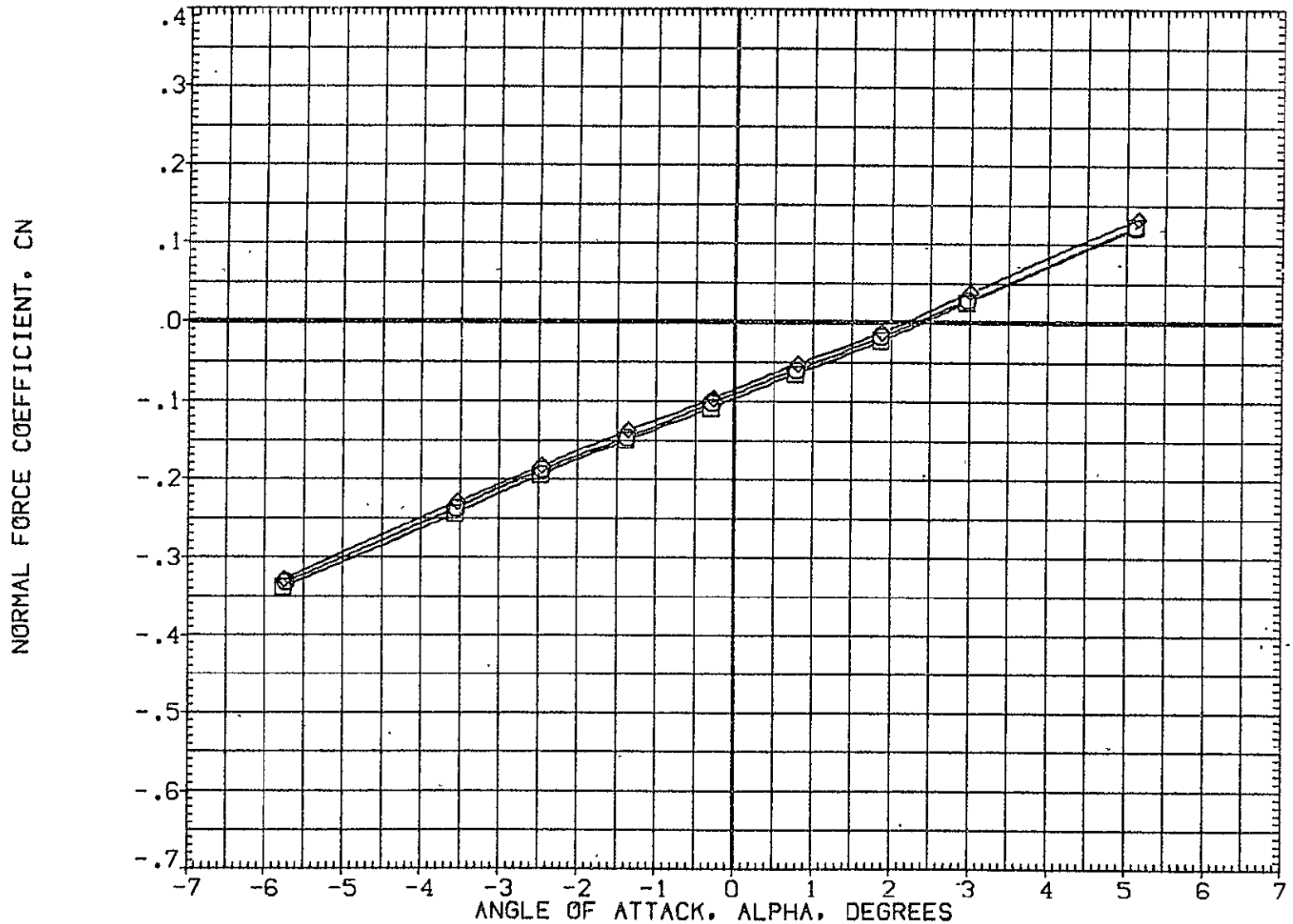


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L019)	○	MSFC TWT 600 (FA14)	01TIS1A1R1K1PS11	.000	.000	90.000	.140
(A1L020)	□	MSFC TWT 600 (FA14)	01TIS1A1R1K1PS10PS11	.000	.000	90.000	.140
(A1L021)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1PS12PS13	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

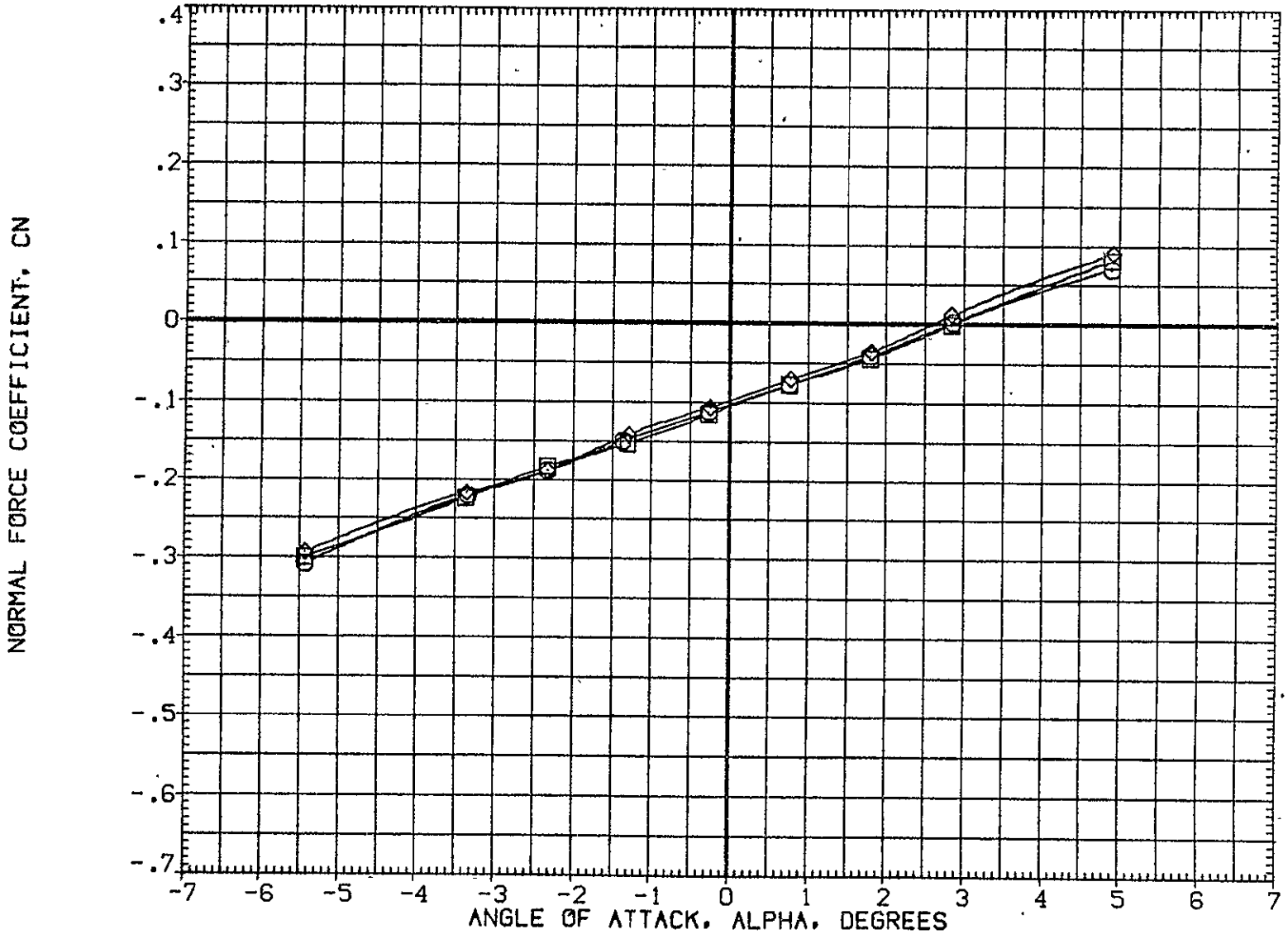


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L019)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140
(A1L020)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	.000	90.000	.140
(A1L021)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



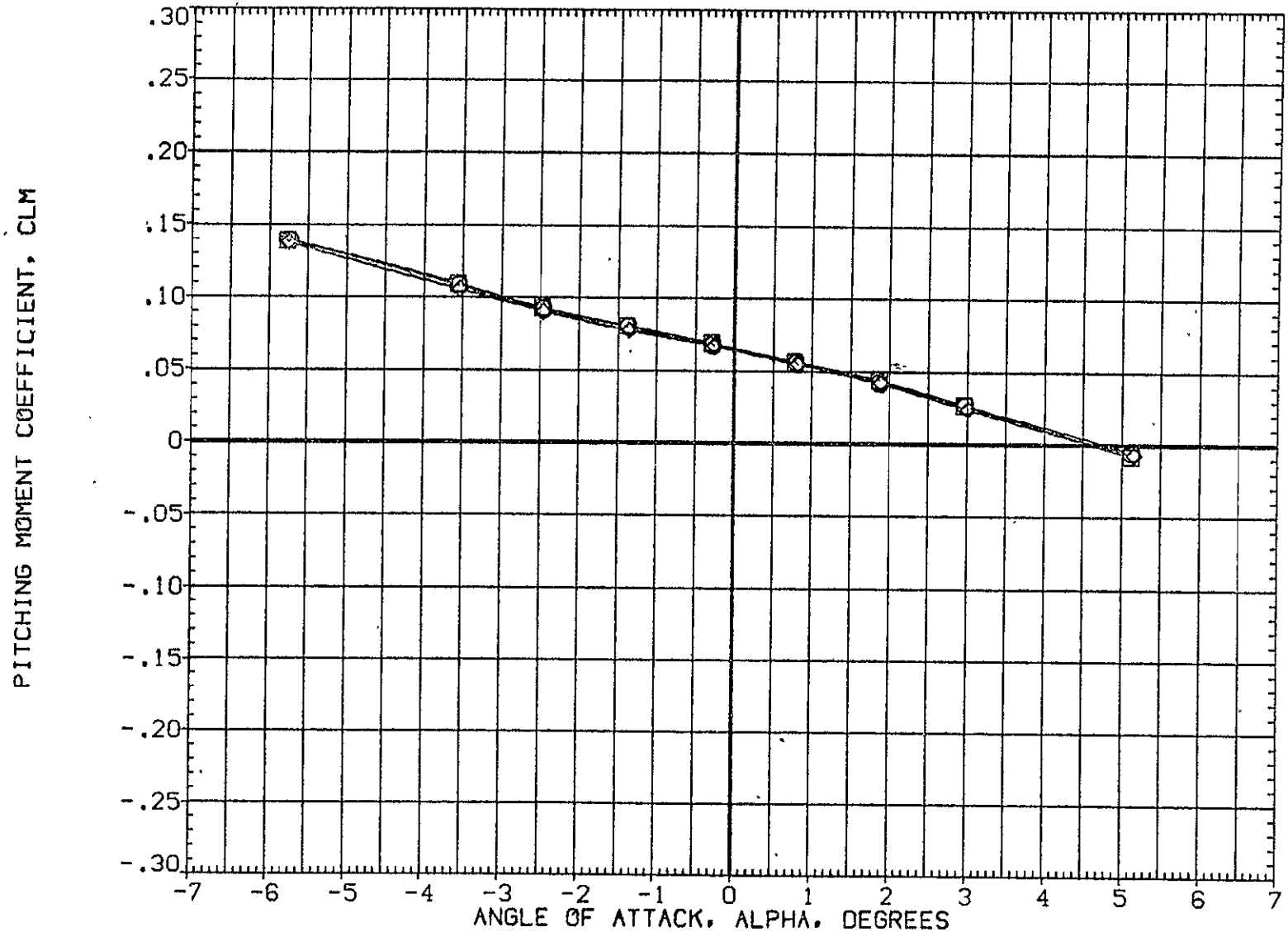
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = 4.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L019)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140
(A1L020)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	.000	90.000	.140
(A1L021)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

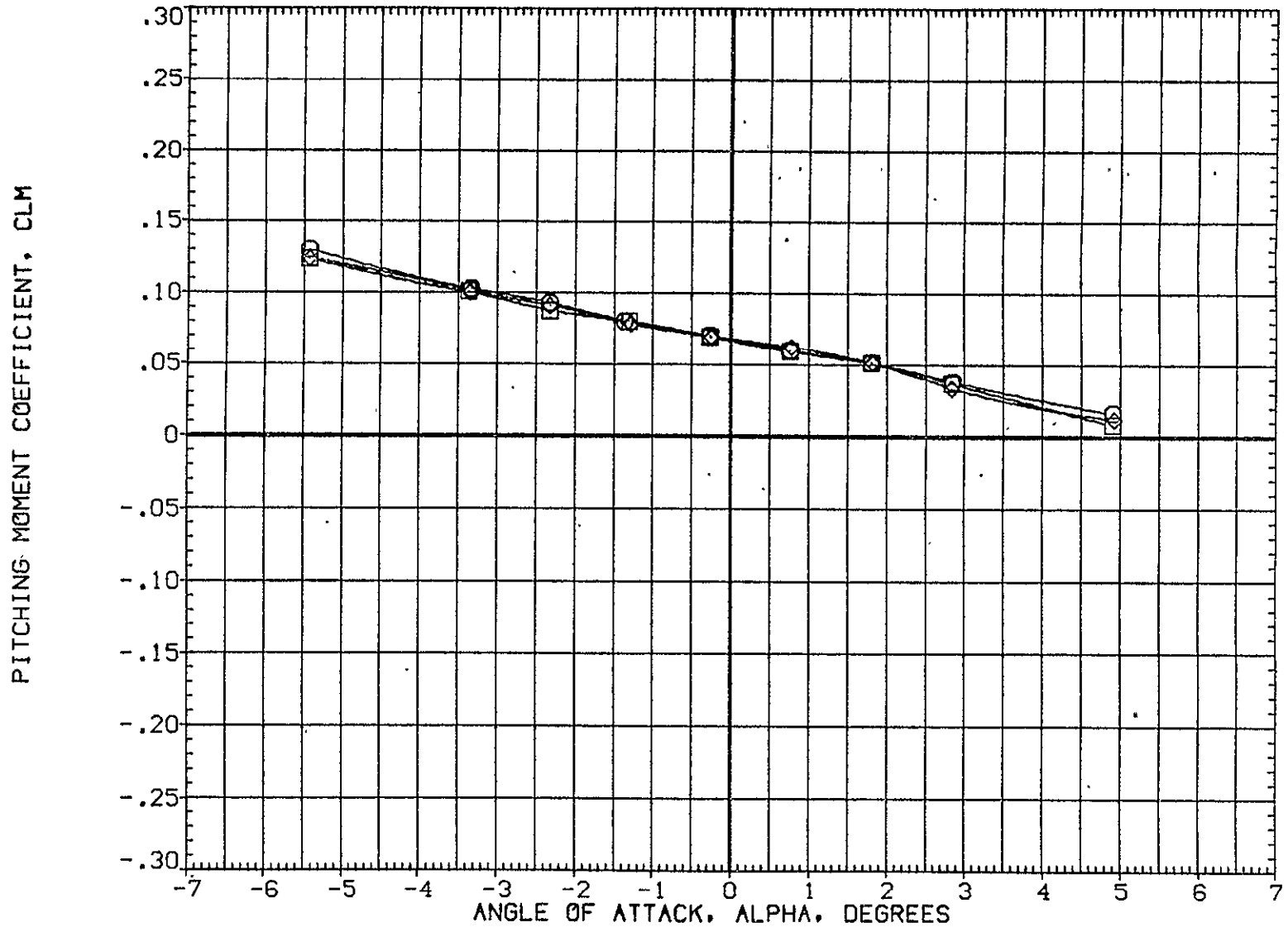


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L019)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140
(A1L020)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	-.000	90.000	.140
(A1L021)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	-.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

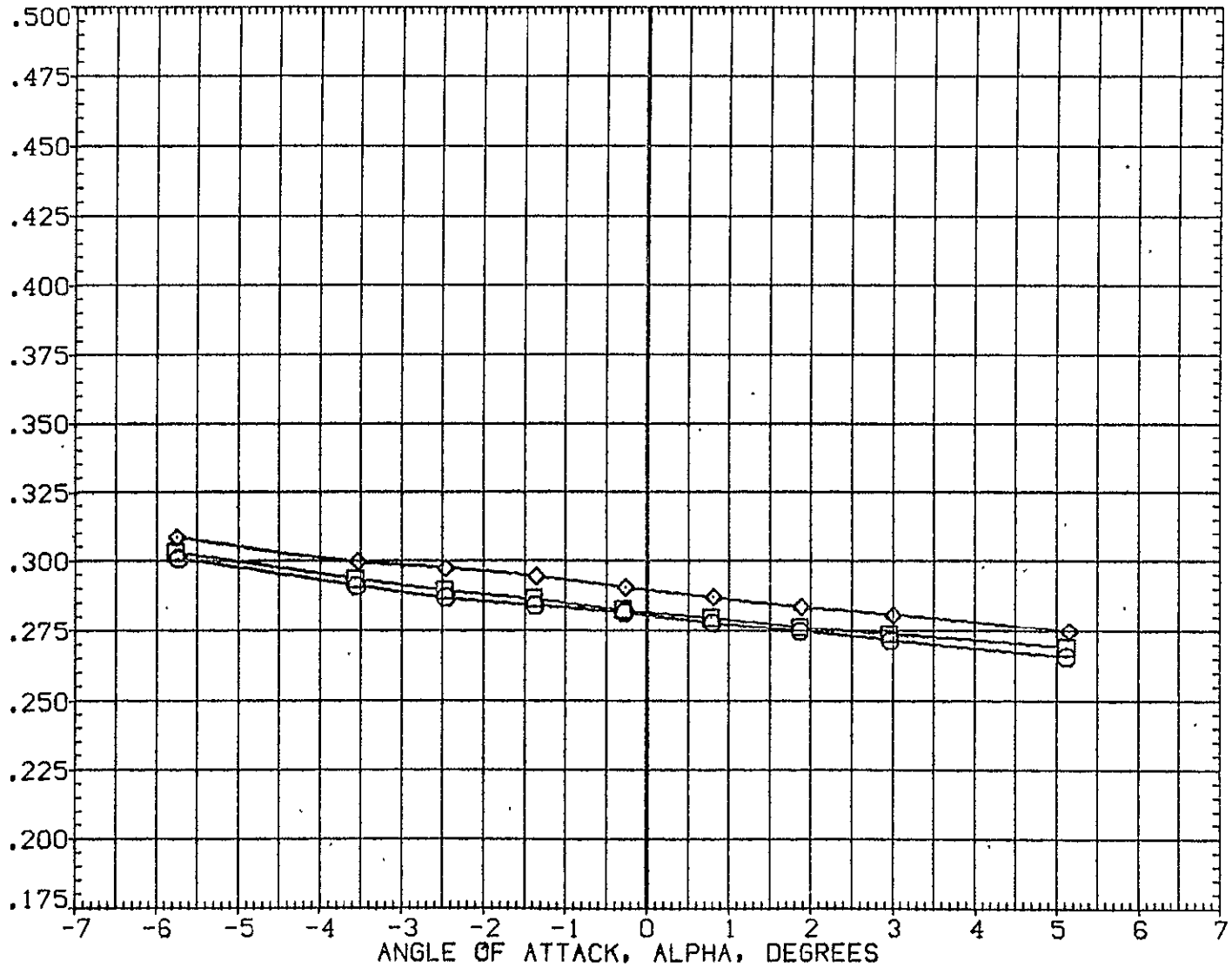


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L019)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140
(A1L020)	▷	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	.000	90.000	.140
(A1L021)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

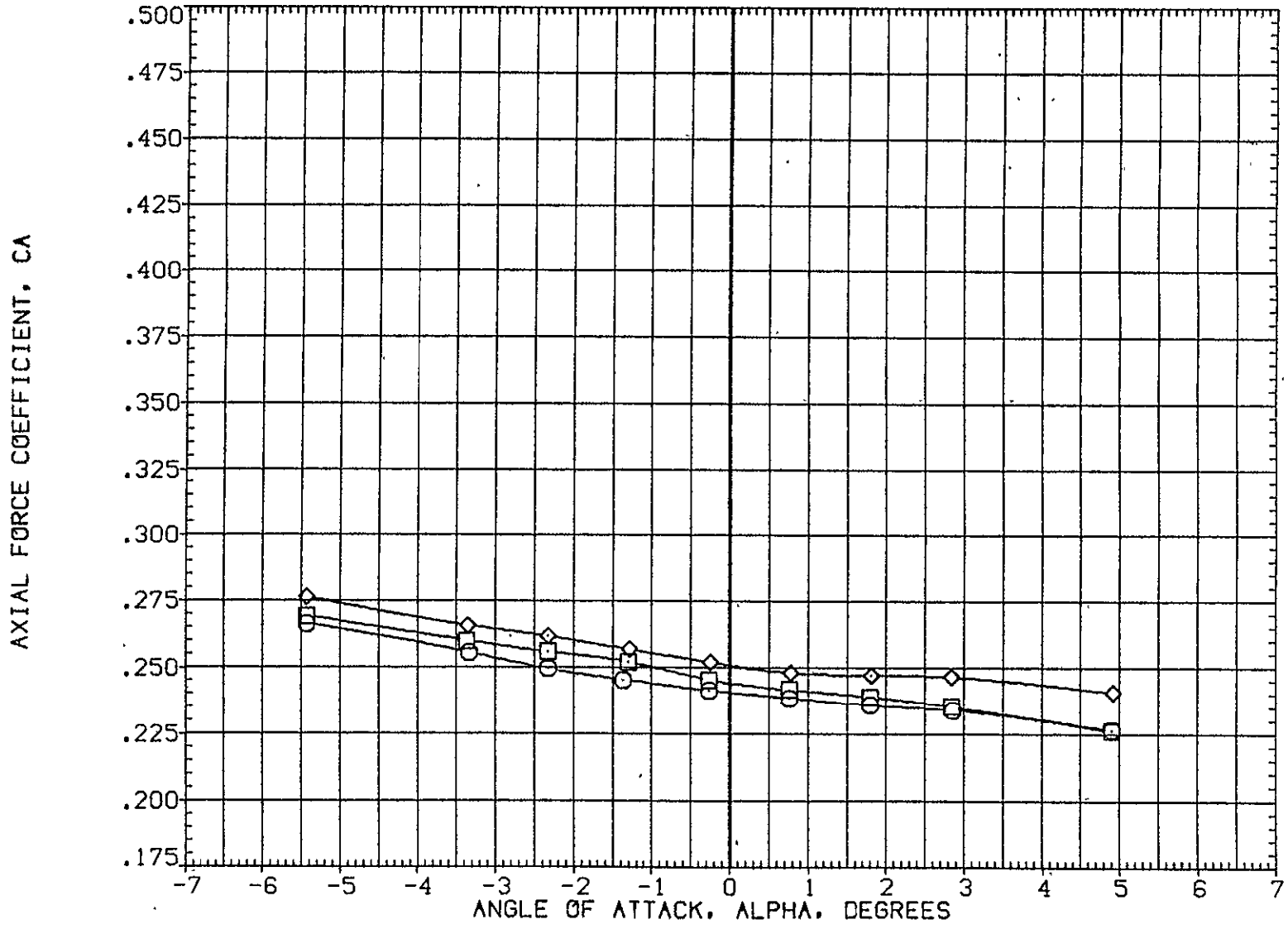


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO19)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140
(AILO20)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	.000	90.000	.140
(AILO21)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

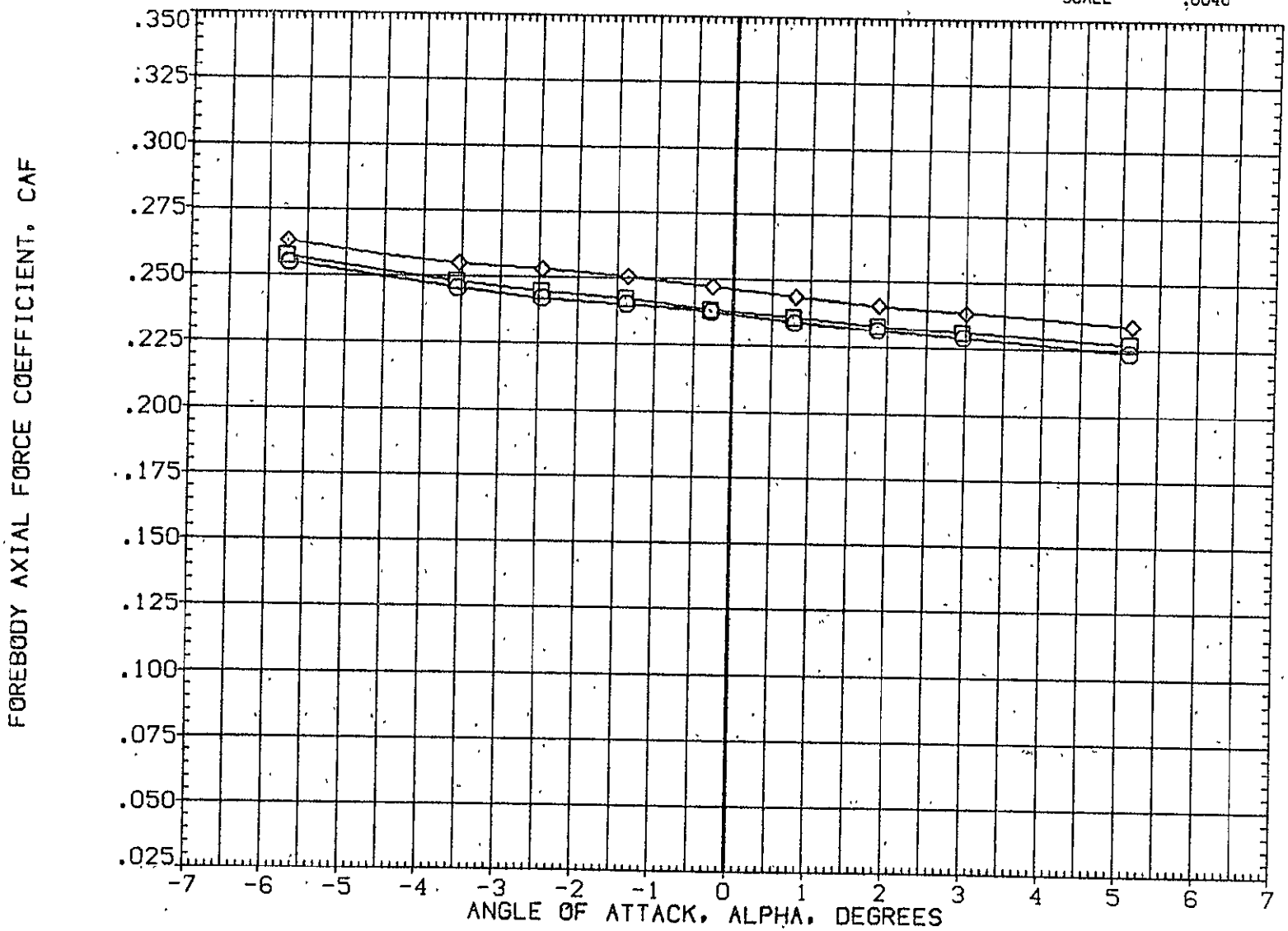


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO19)	MSFC TWT 600 (FA14)	01TIS1AIR1K1PS11	.000	.000	90.000	.140
(AILO20)	MSFC TWT 600 (FA14)	01TIS1AIR1K1PS10PS11	.000	.000	90.000	.140
(AILO21)	MSFC TWT 600 (FA14)	01TIS1AIR1K1PS12PS13	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

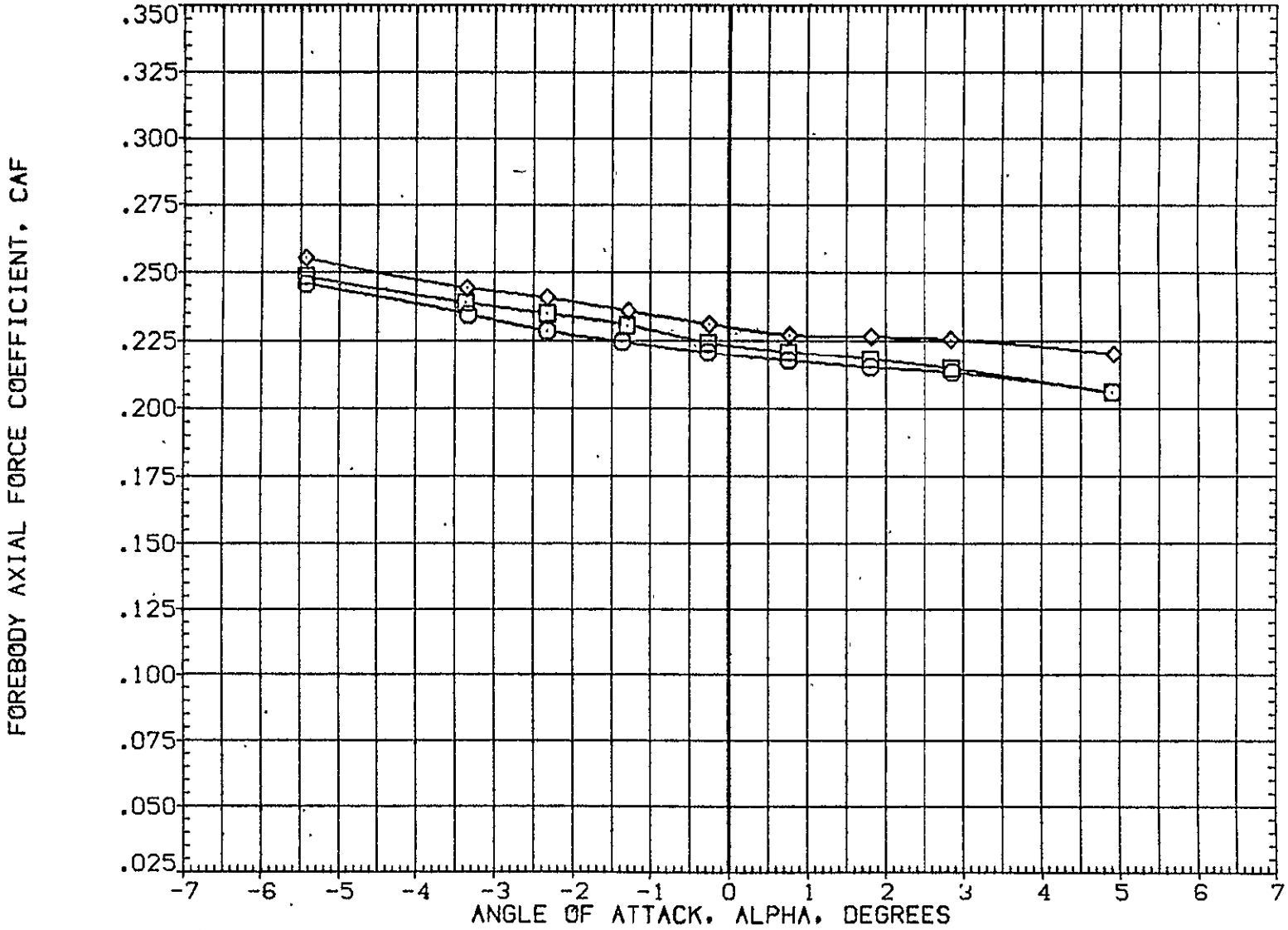


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL019)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140
(AIL020)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	.000	90.000	.140
(AIL021)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

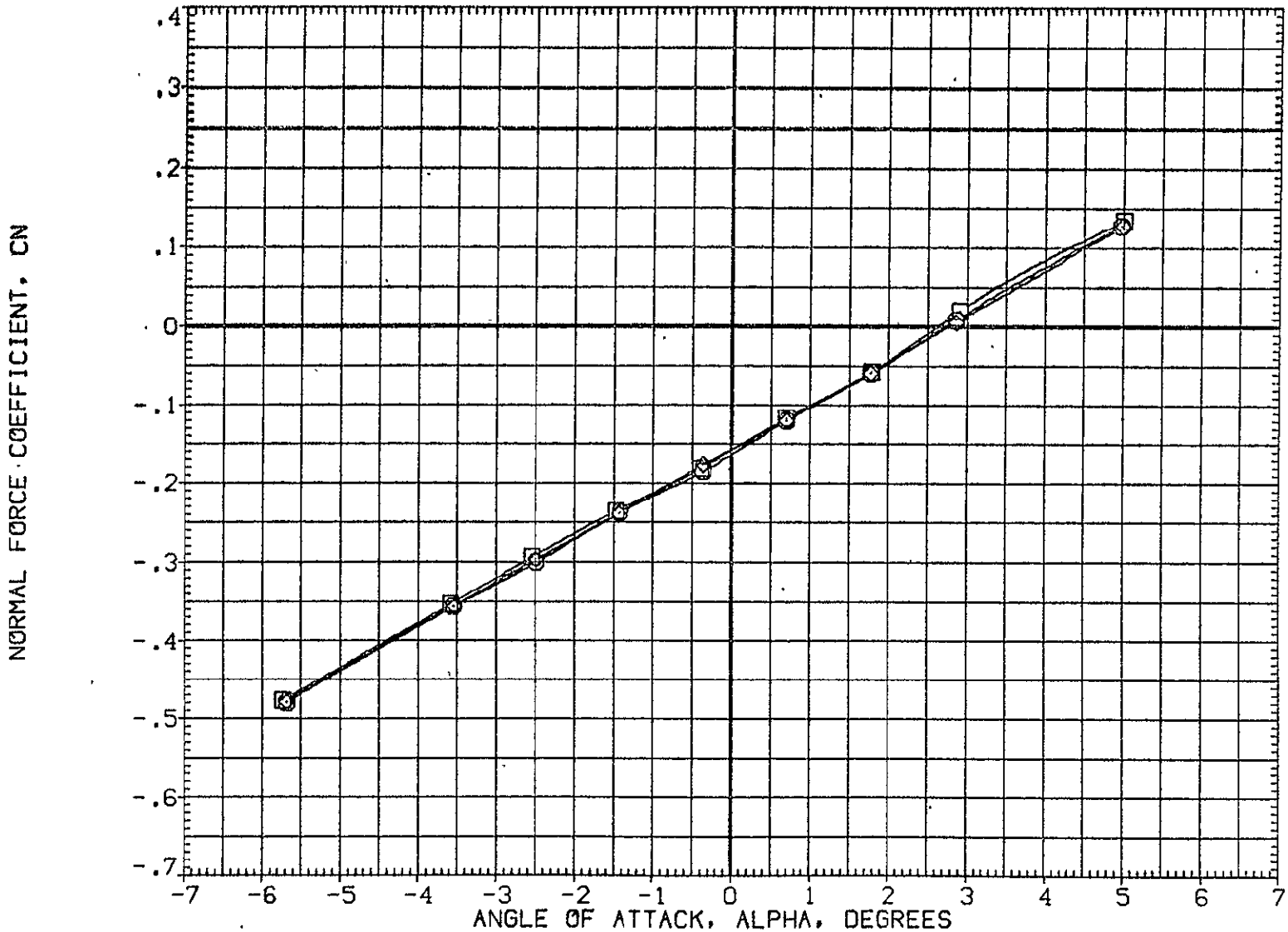


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	▭	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	▭	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

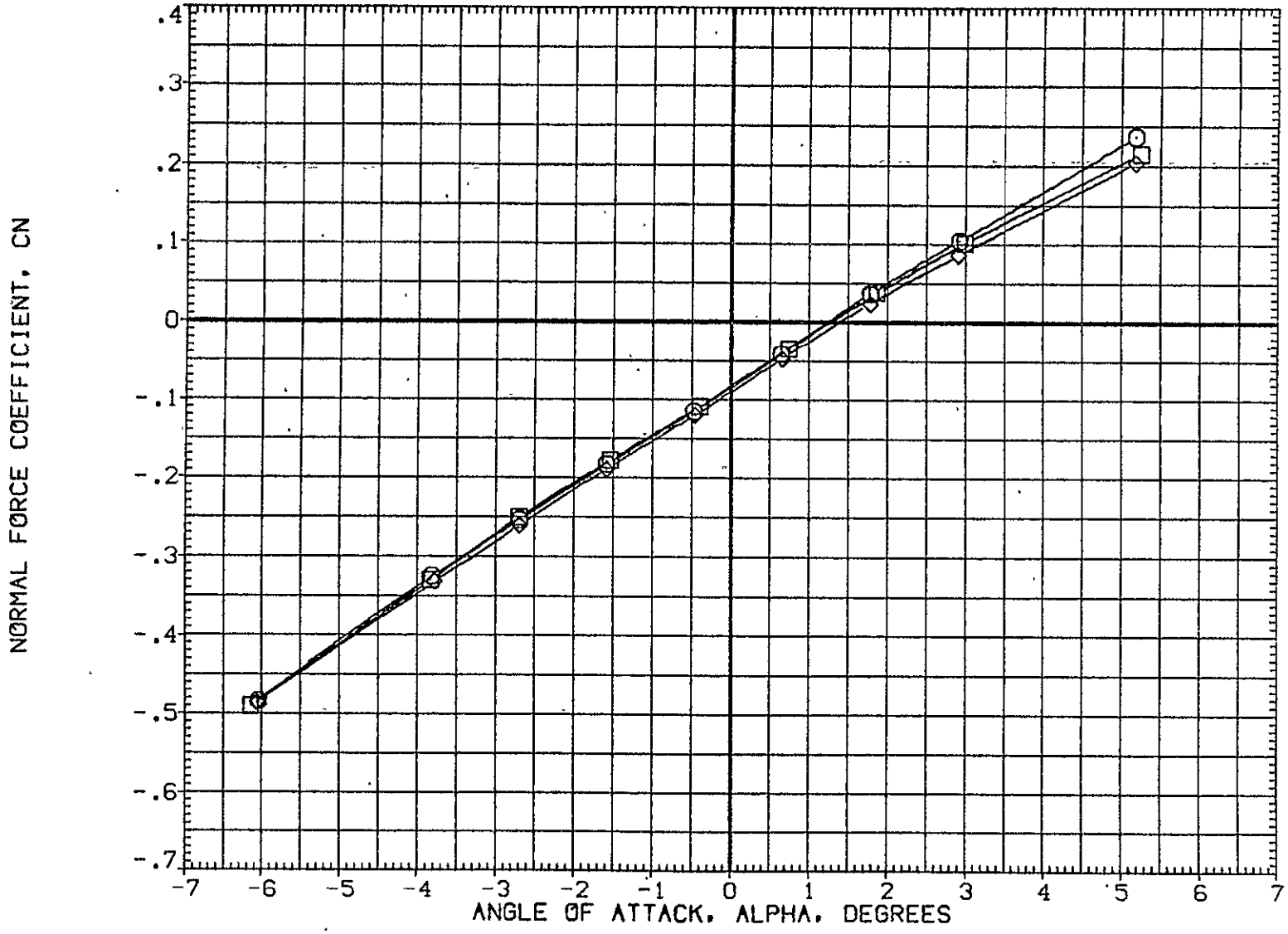


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



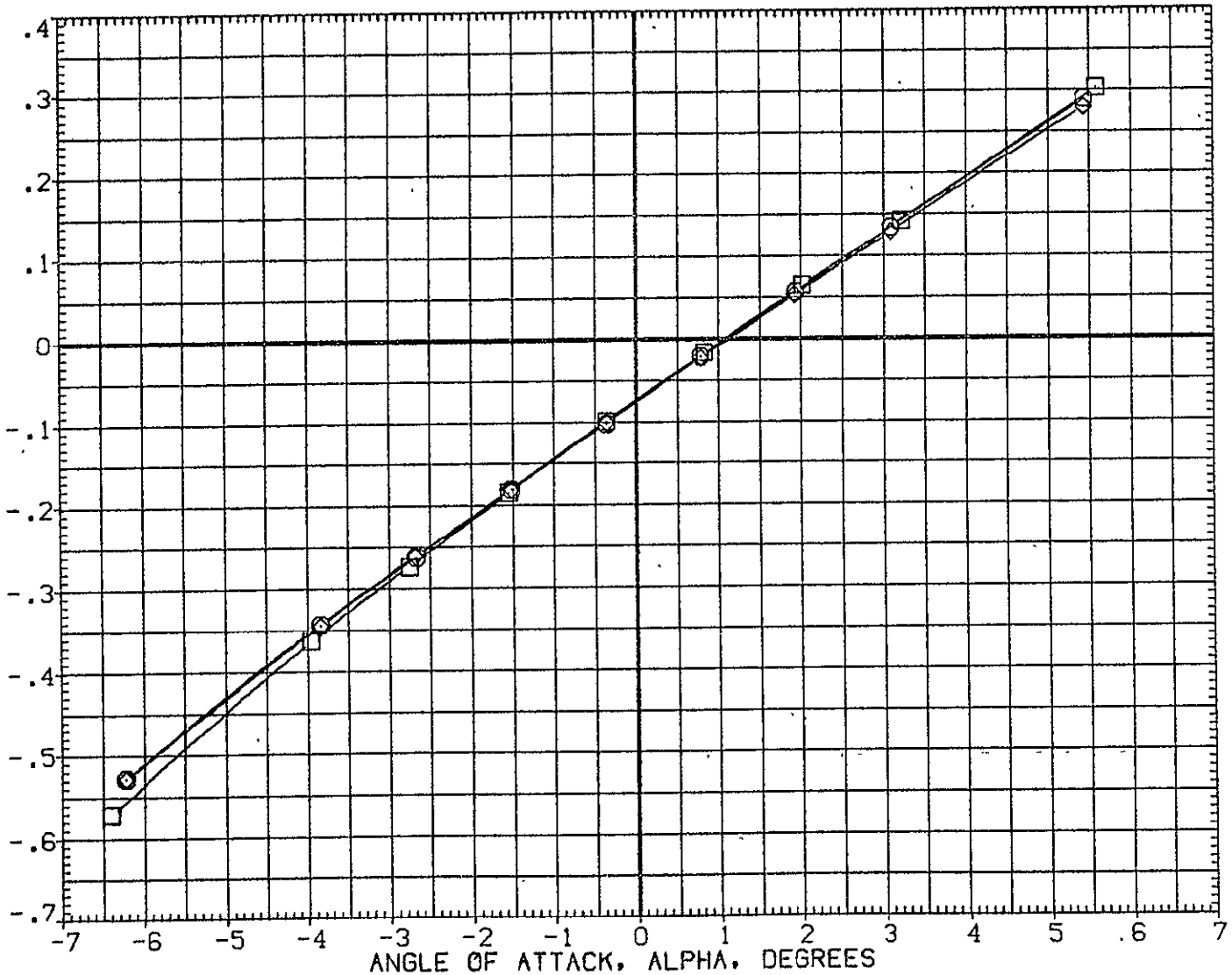
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO22)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(AILO23)	◇□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(AILO24)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

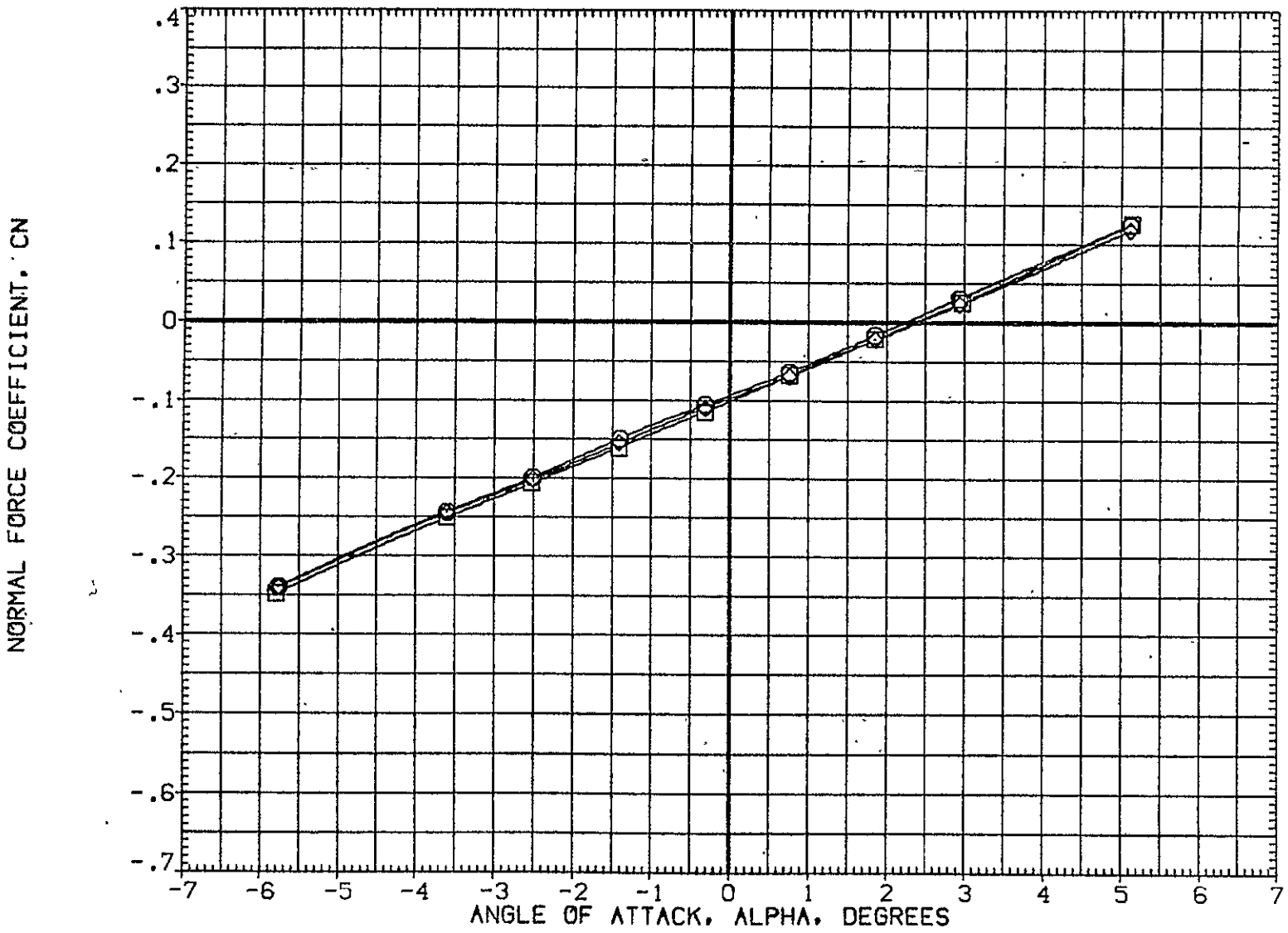


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

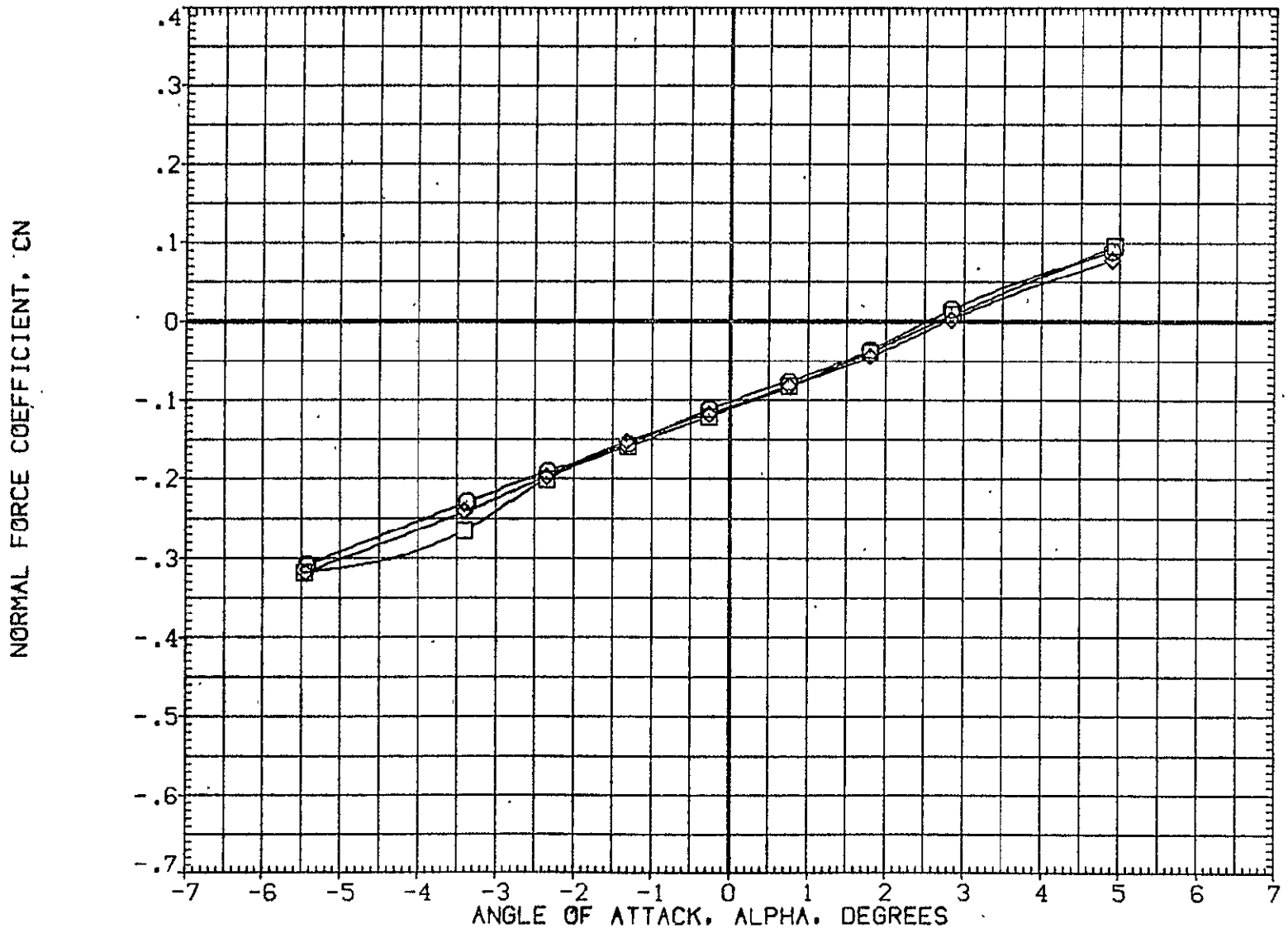


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

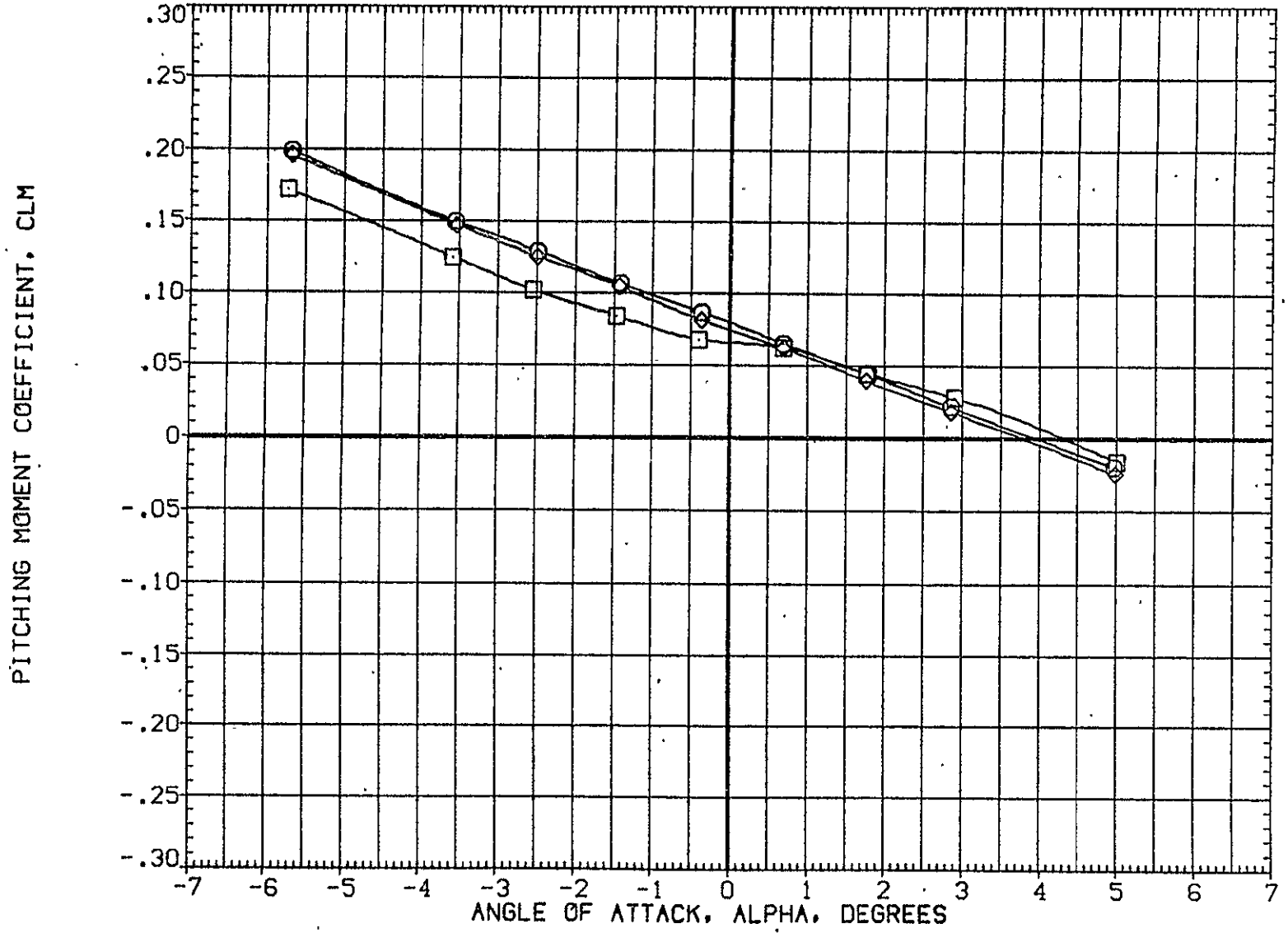


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	▢	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
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XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

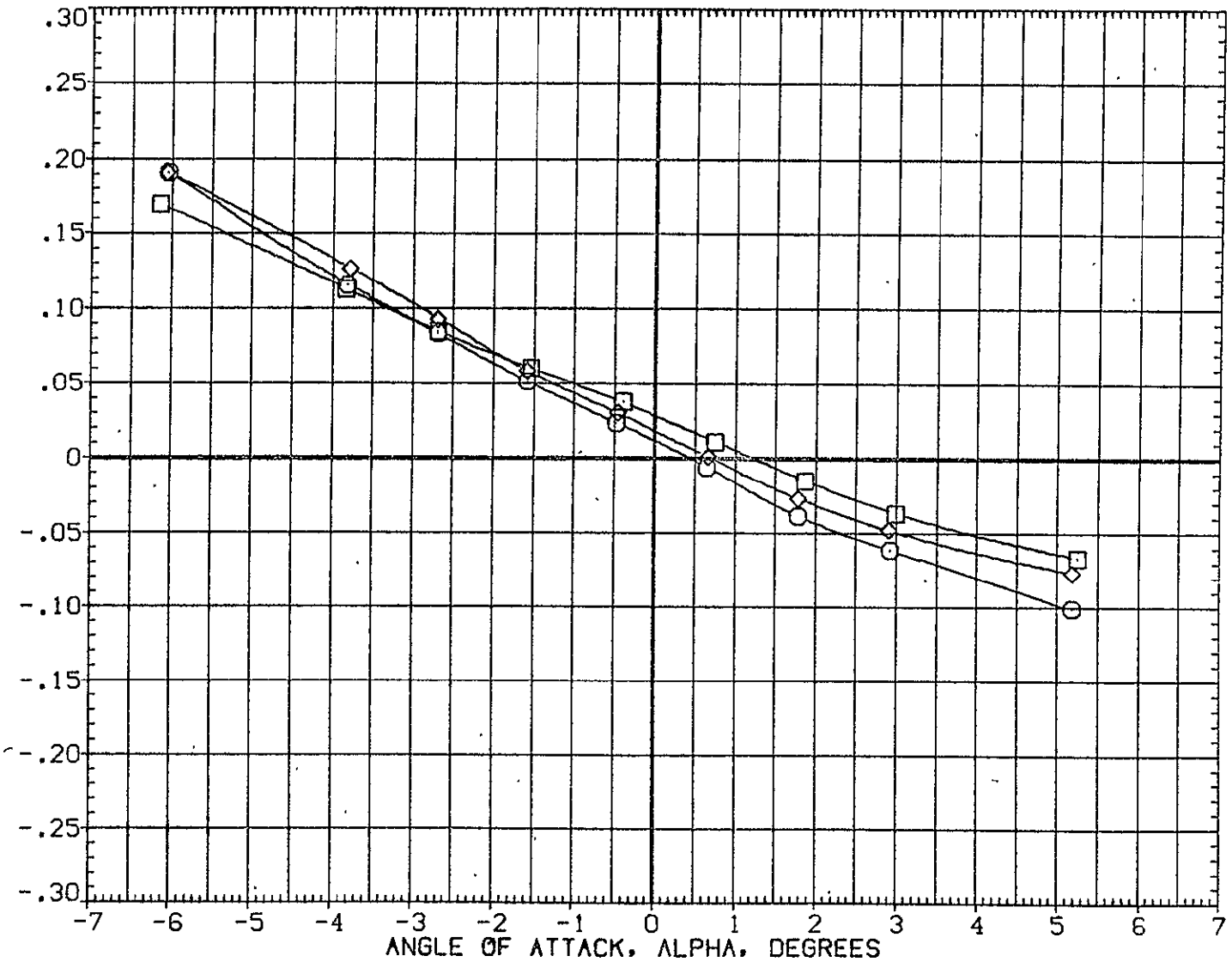


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

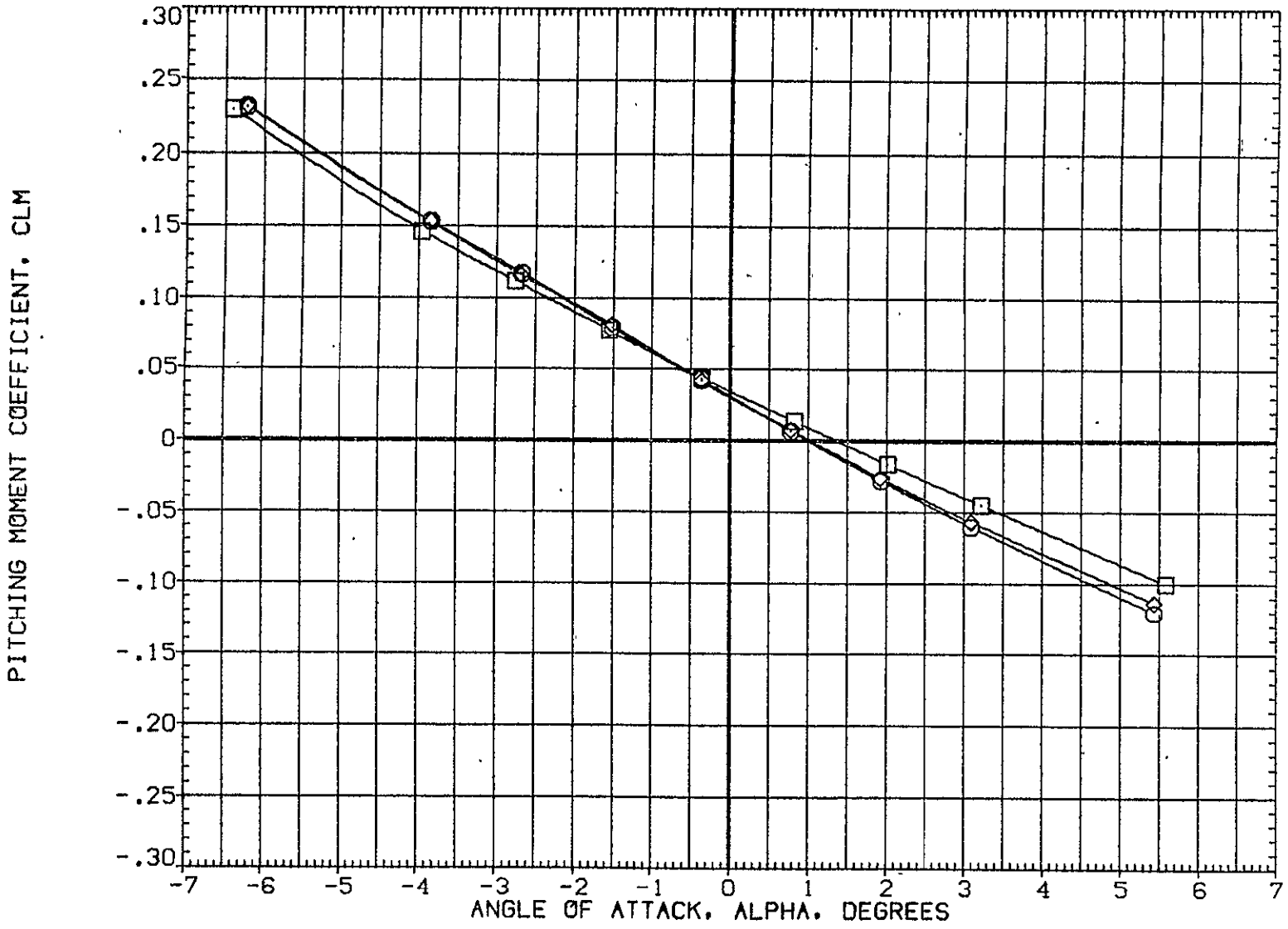


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

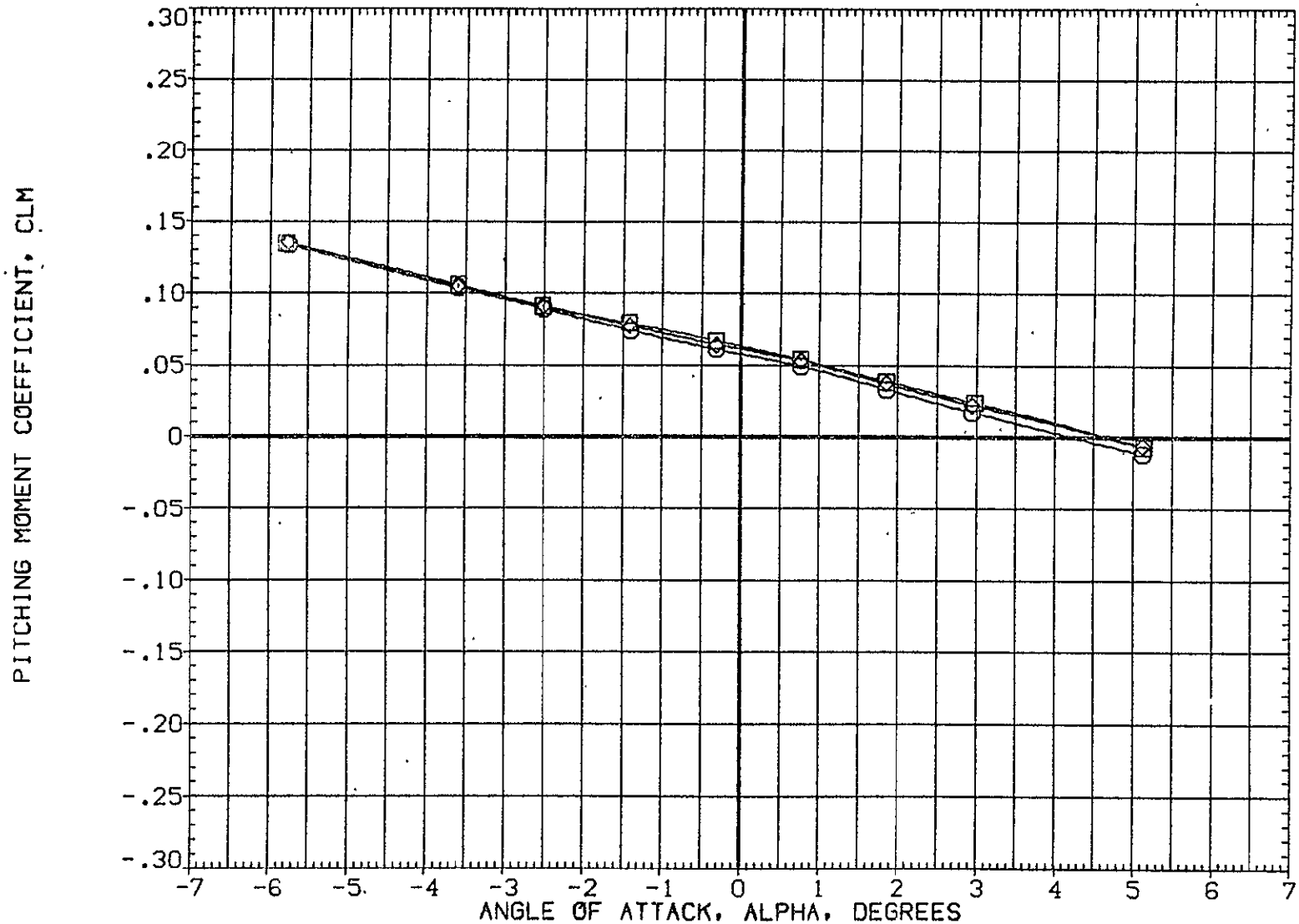


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	⬭	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	⬭□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

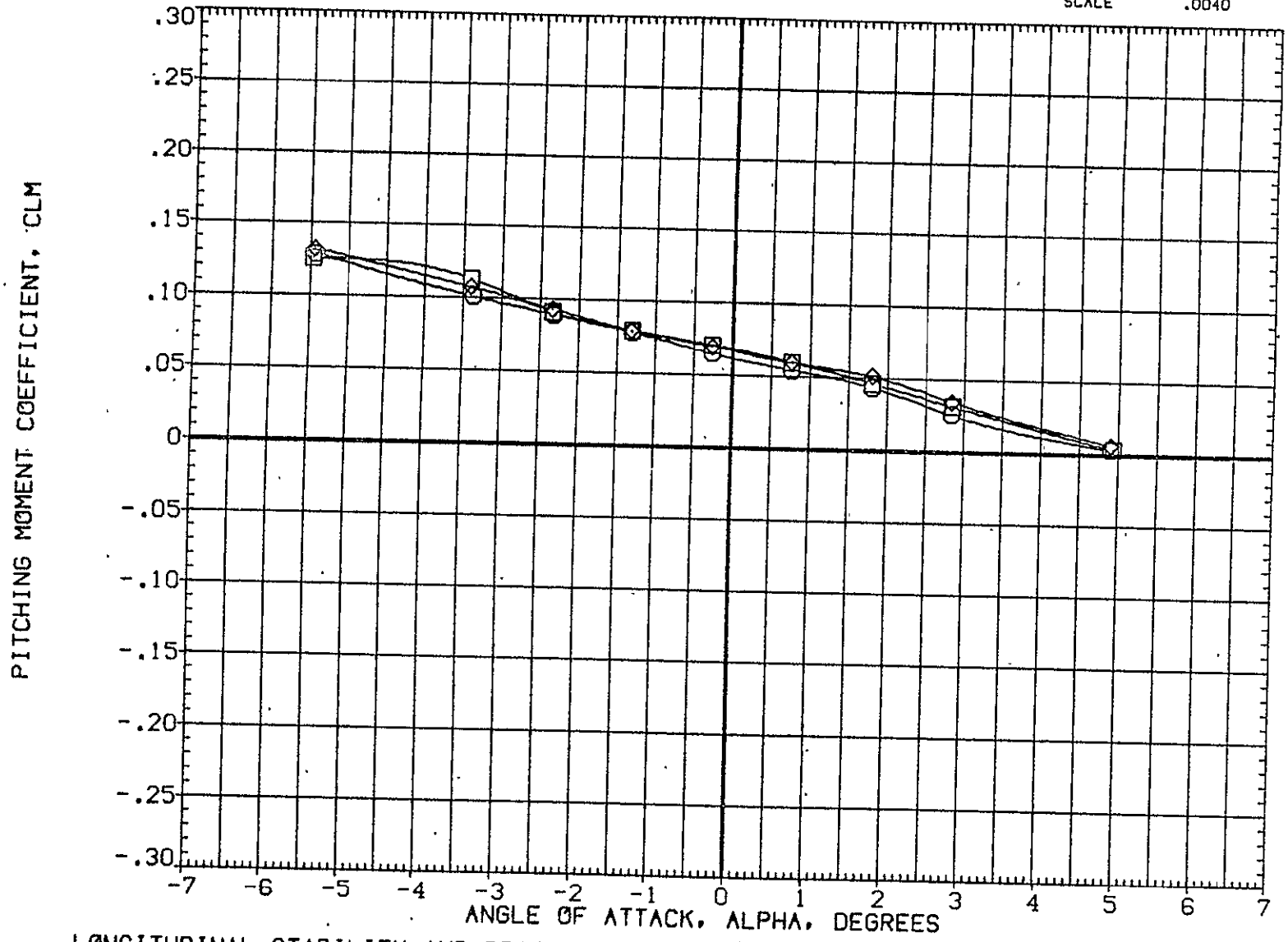


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO22)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(AILO23)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(AILO24)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

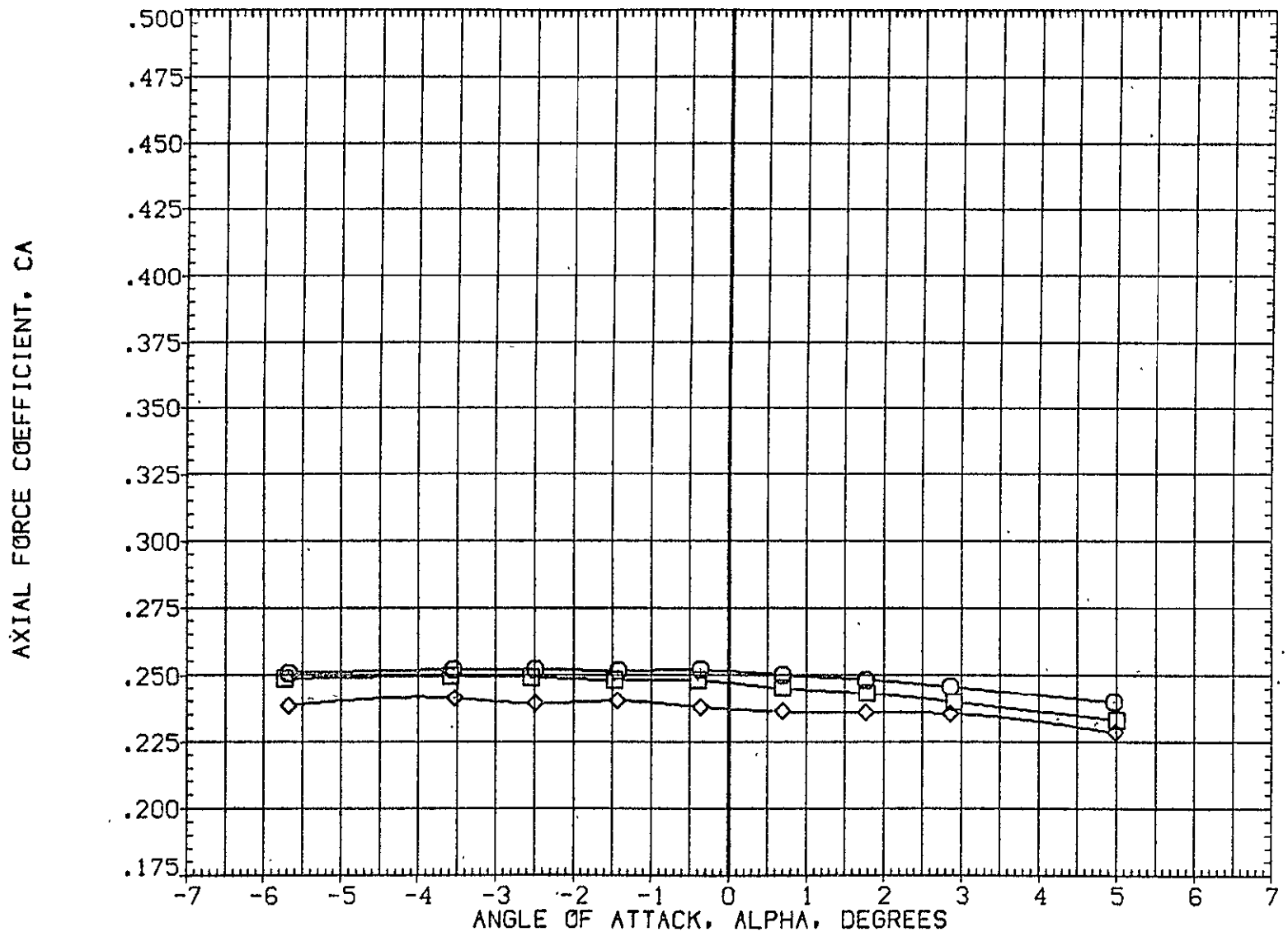


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILØ22)	▭	MSFC TWT 6ØØ (FA14)	ØITISIAIRIKIF1ØF13	.ØØØ	.ØØØ	9Ø.ØØØ	.14Ø
(AILØ23)	▭	MSFC TWT 6ØØ (FA14)	ØITISIAIRIKIF12F11	.ØØØ	.ØØØ	9Ø.ØØØ	.14Ø
(AILØ24)	◇	MSFC TWT 6ØØ (FA14)	ØITISIAIRIKIF12F14	.ØØØ	.ØØØ	9Ø.ØØØ	.14Ø

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

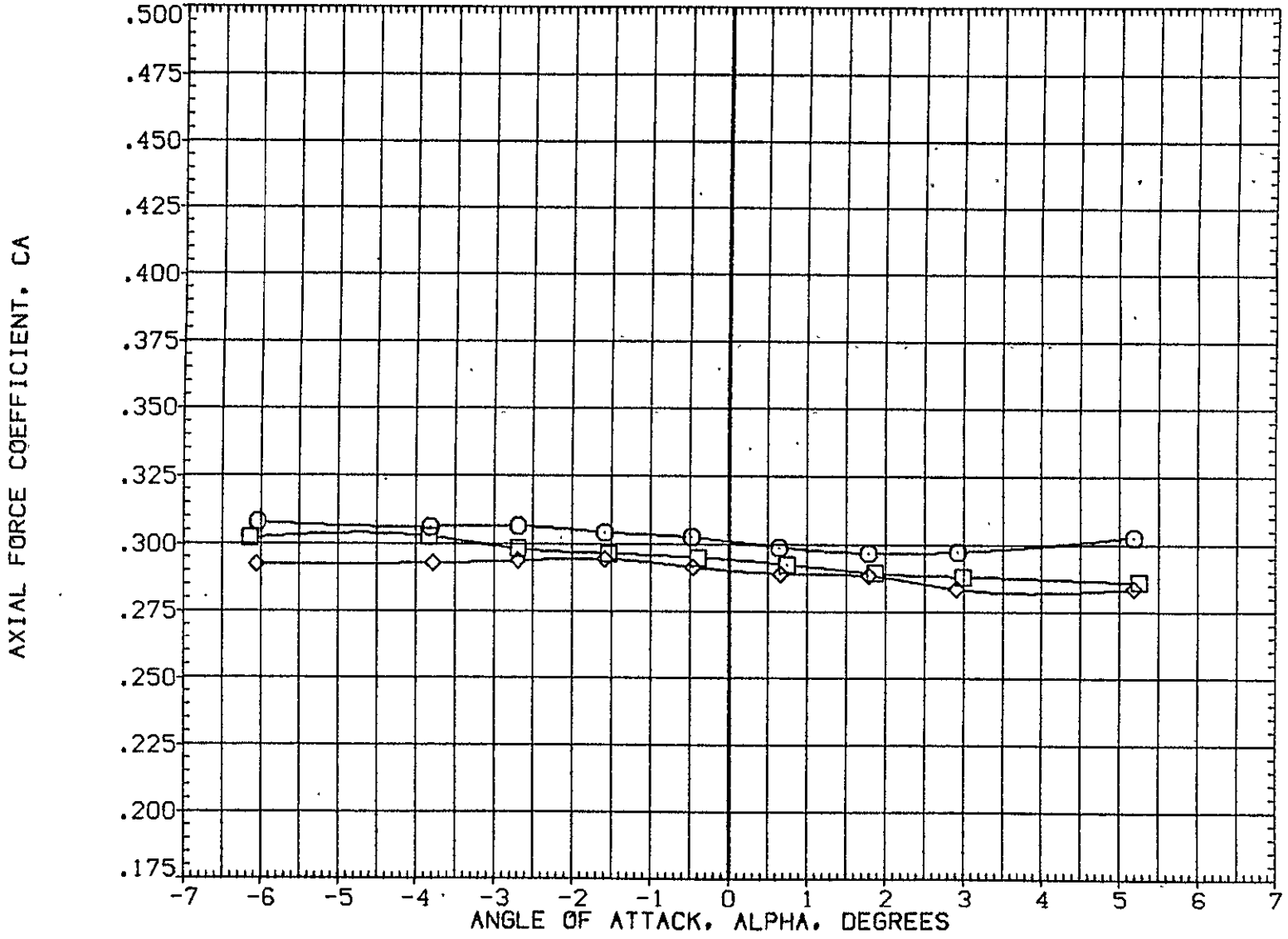


LØNGITUDINAL STABILITY AND DRAG CHARACTERISTICS ØF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	' ORBINC	PHI-S	Z
(AILO22) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(AILO23) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(AILO24) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

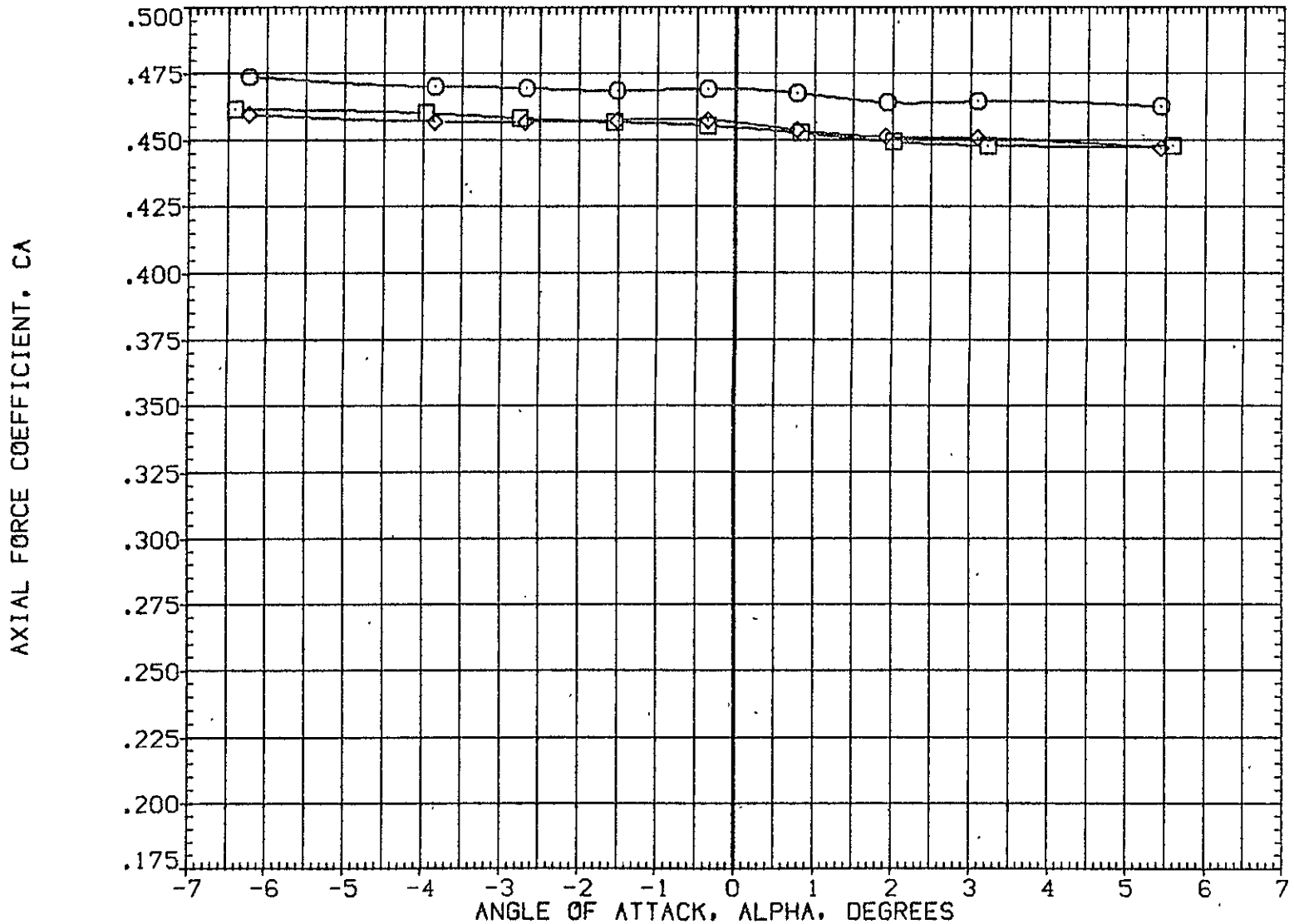


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO22)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1LO23)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1LO24)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

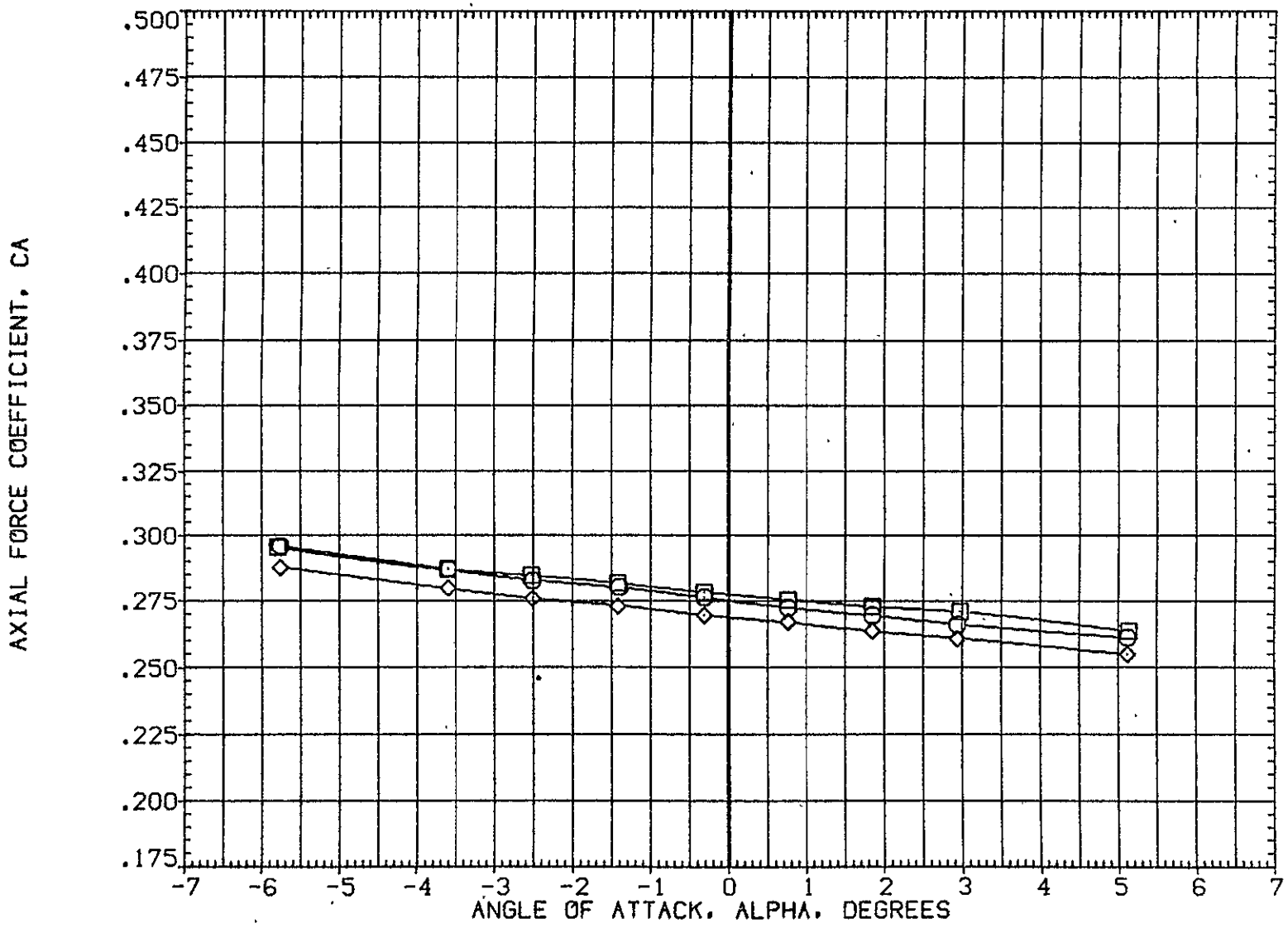


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F1DF13	.000	.000	90.000	.140
(A1L023)	⊏	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

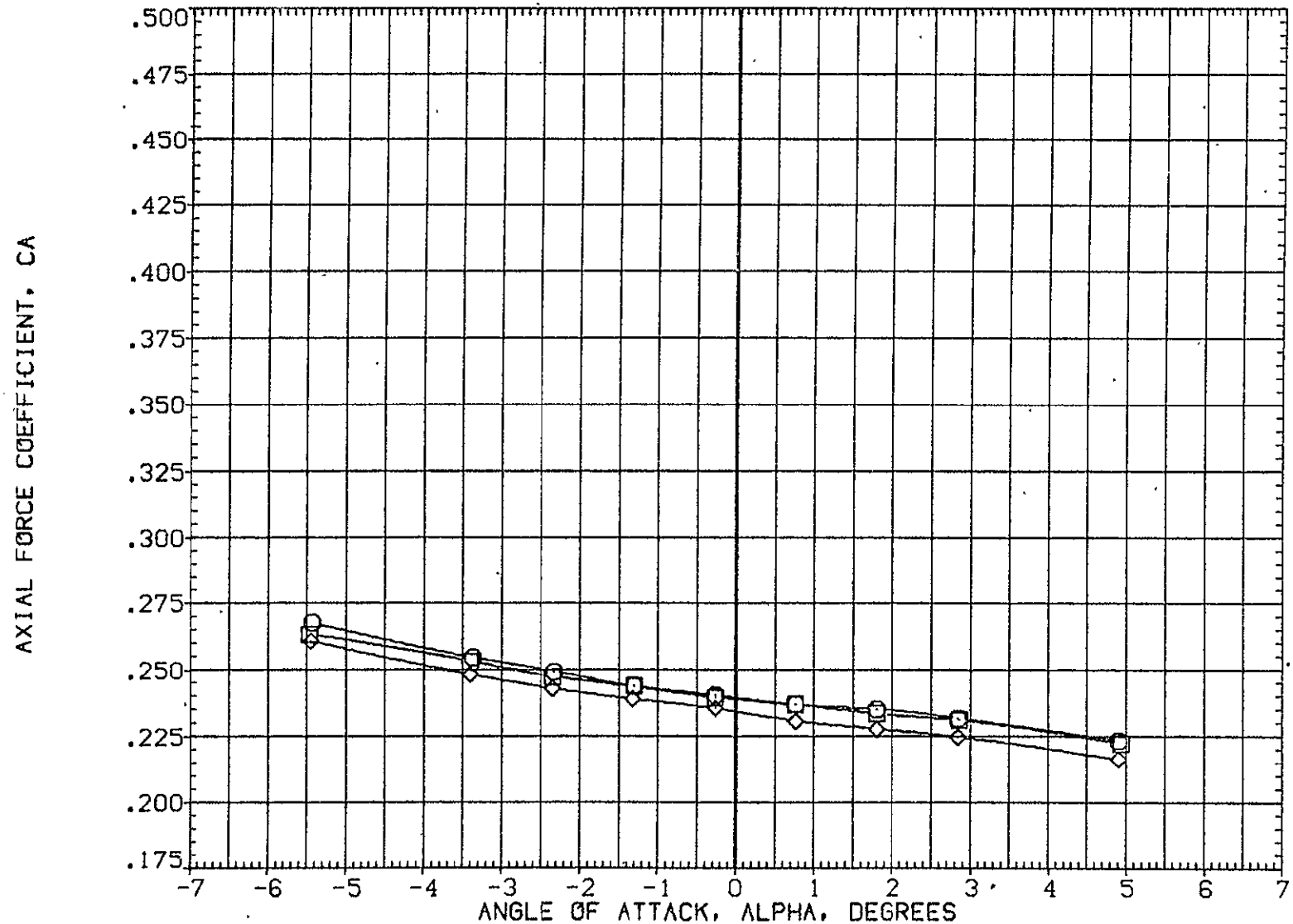


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
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YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



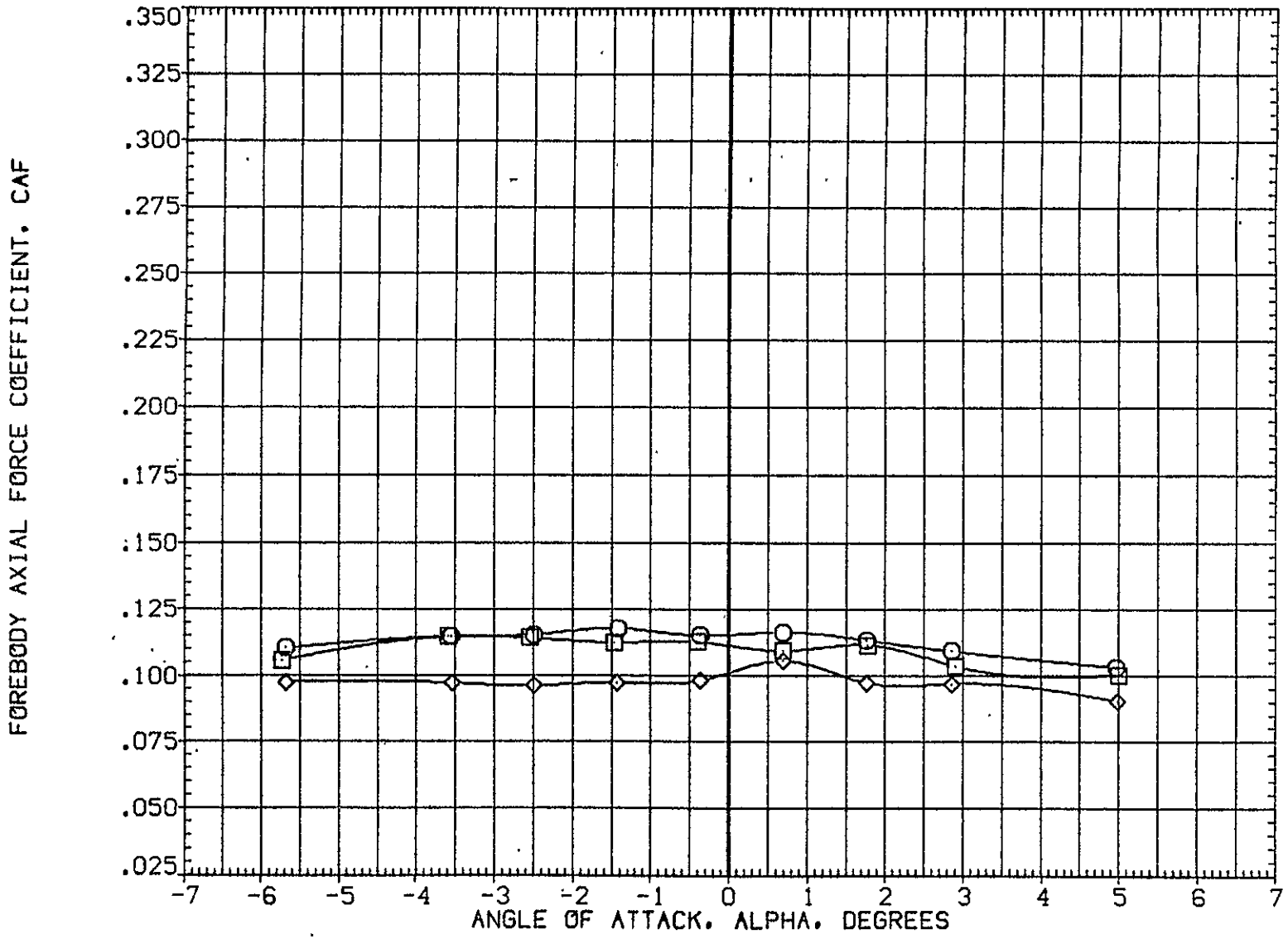
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

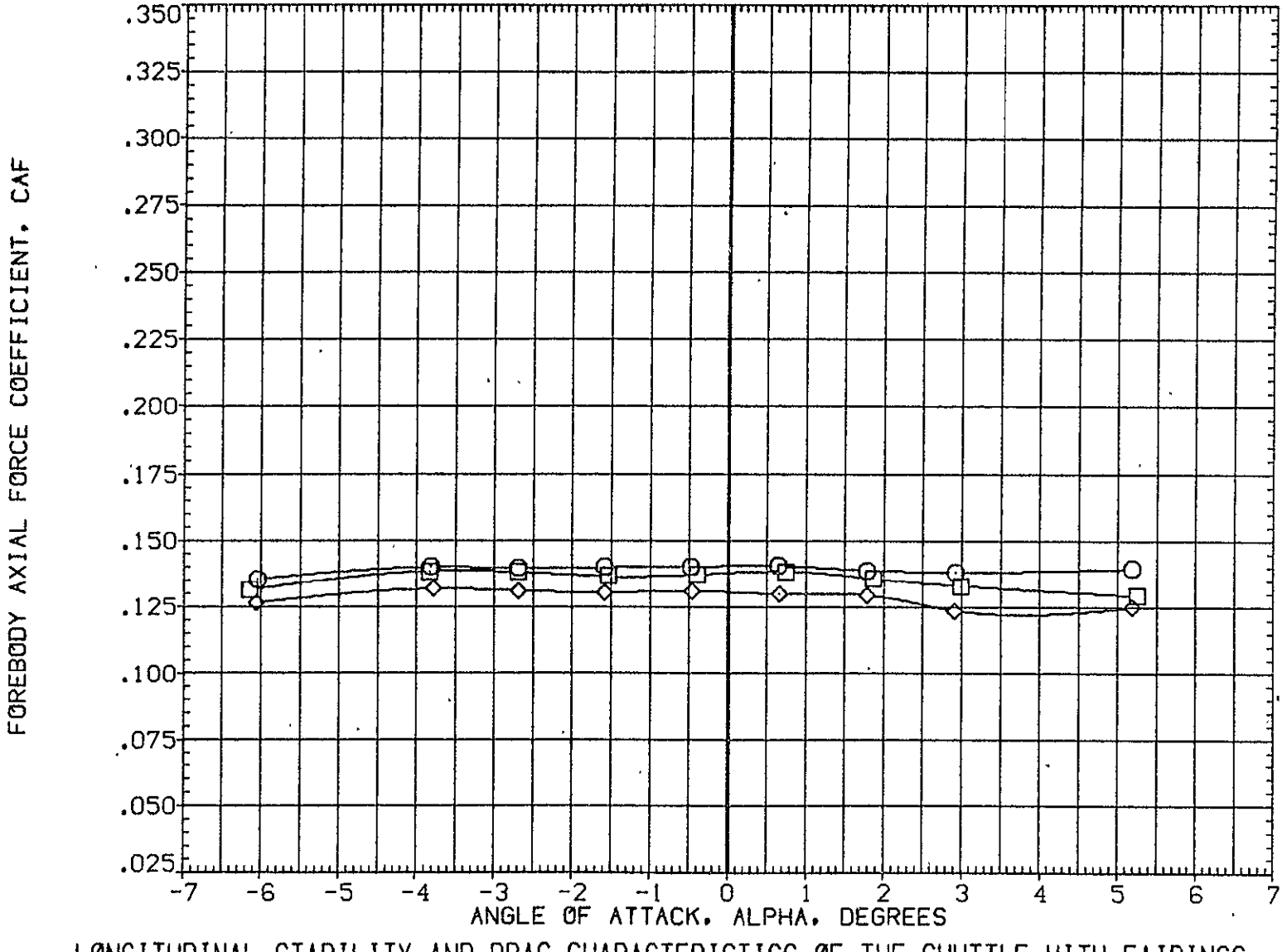


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL022)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(AIL023)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(AIL024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

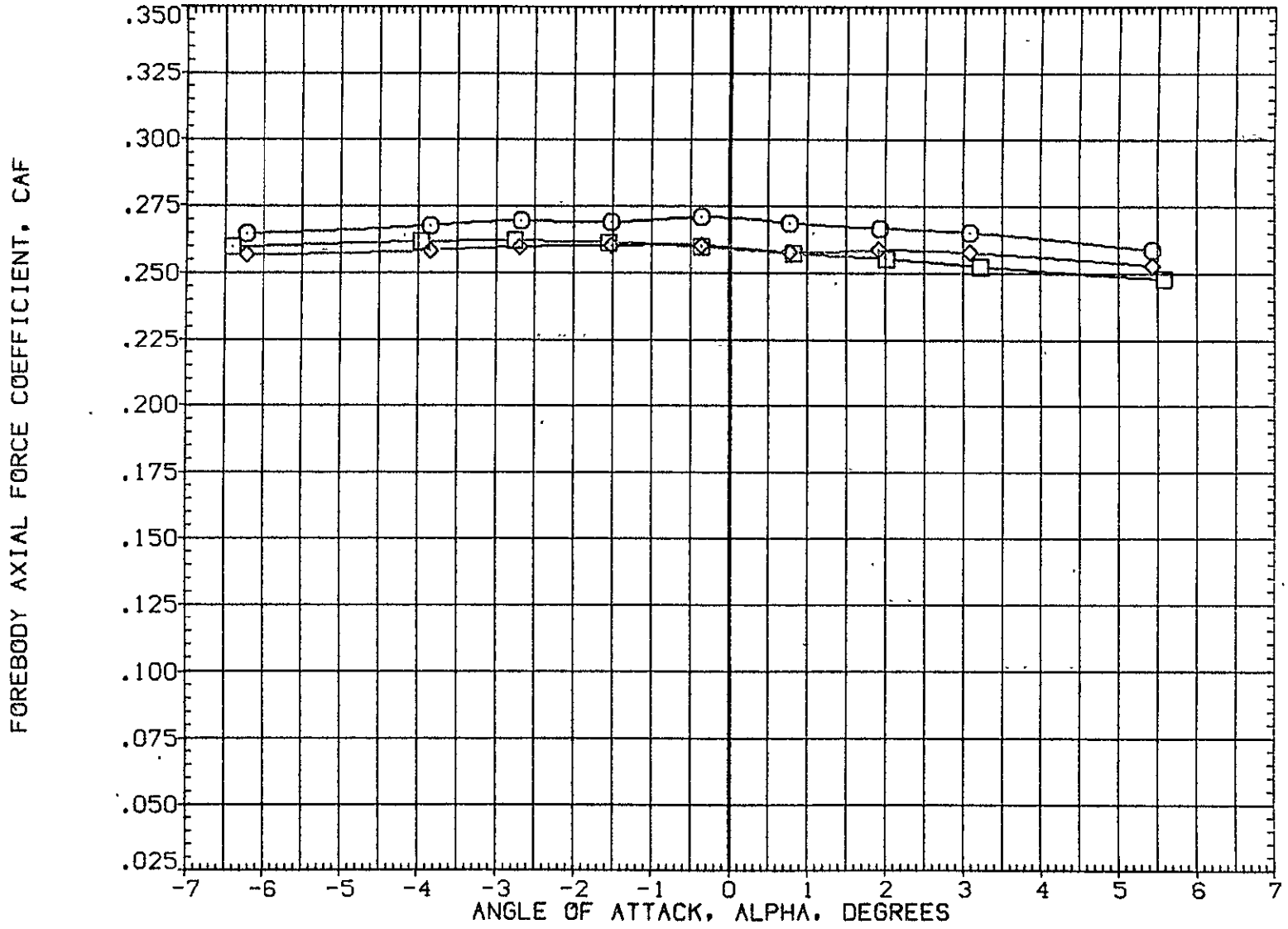


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



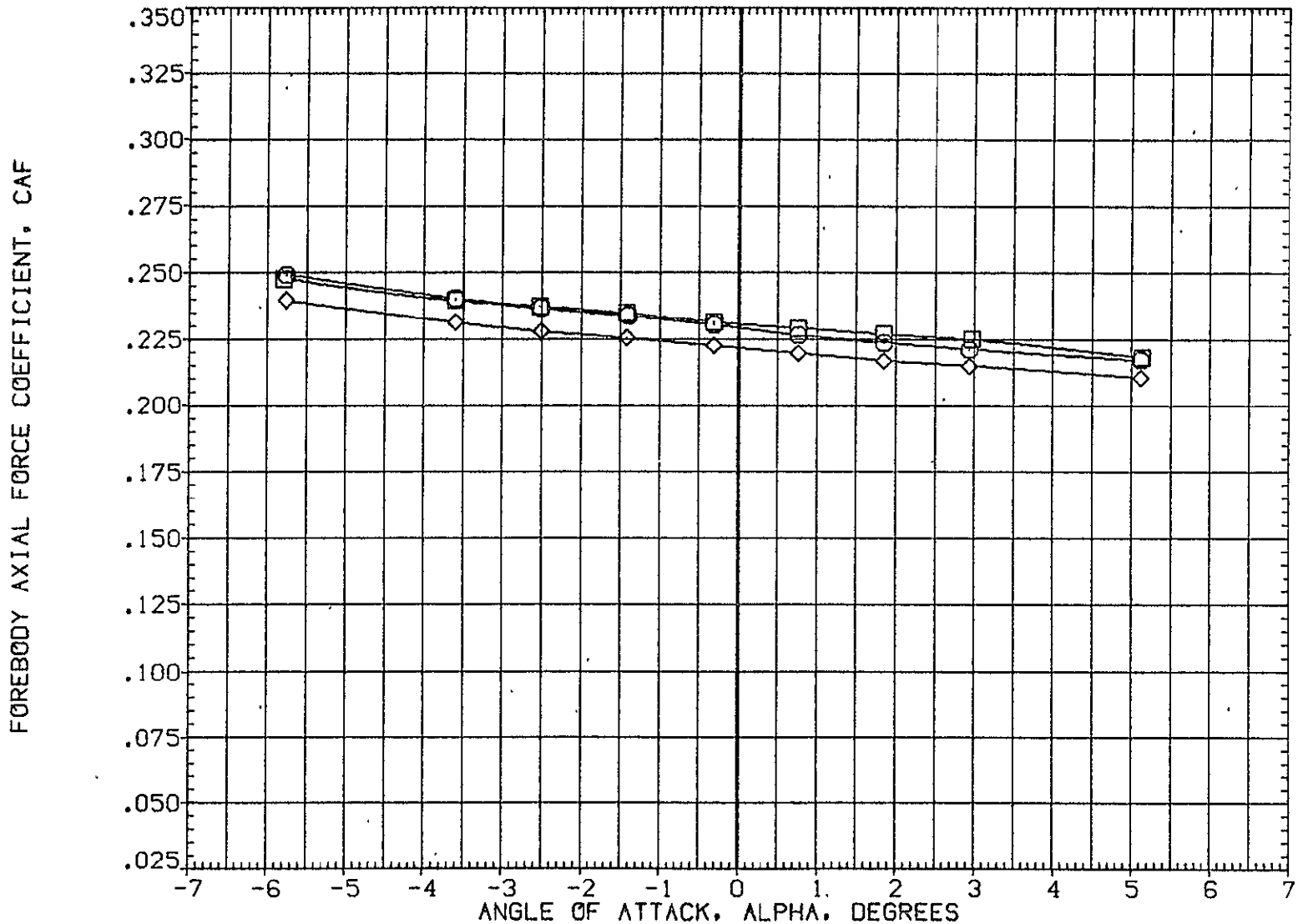
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

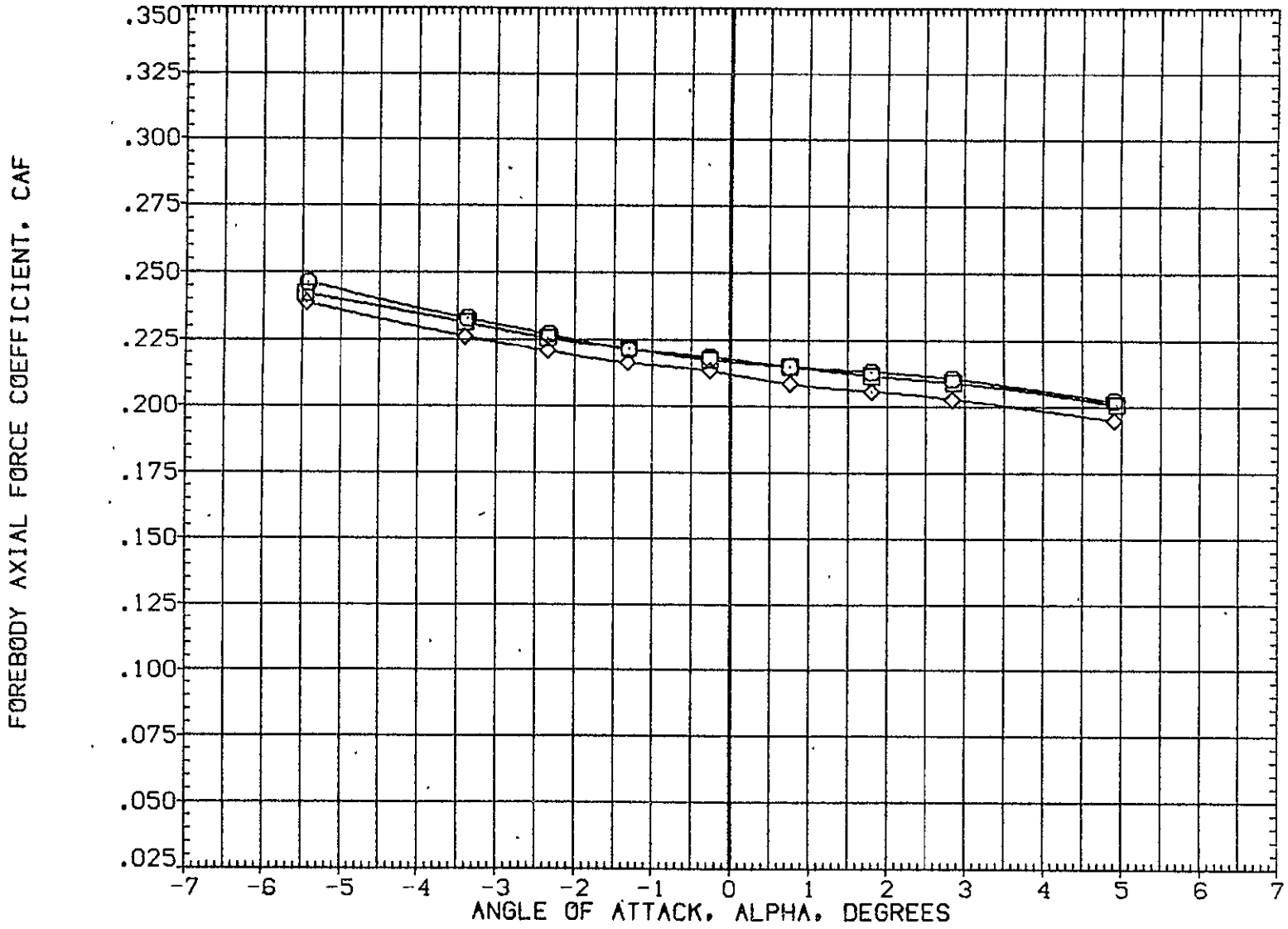


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L022)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

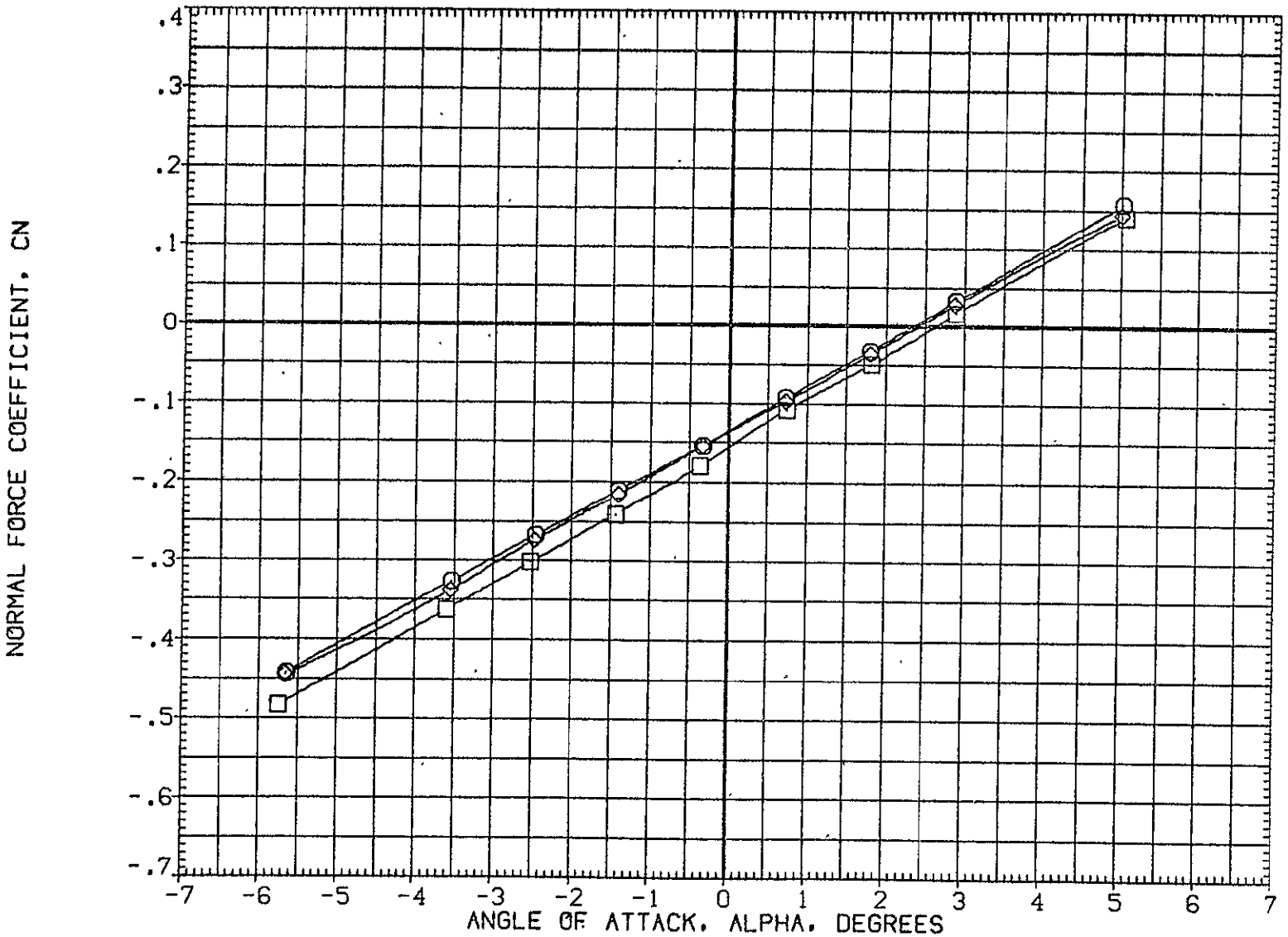


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	



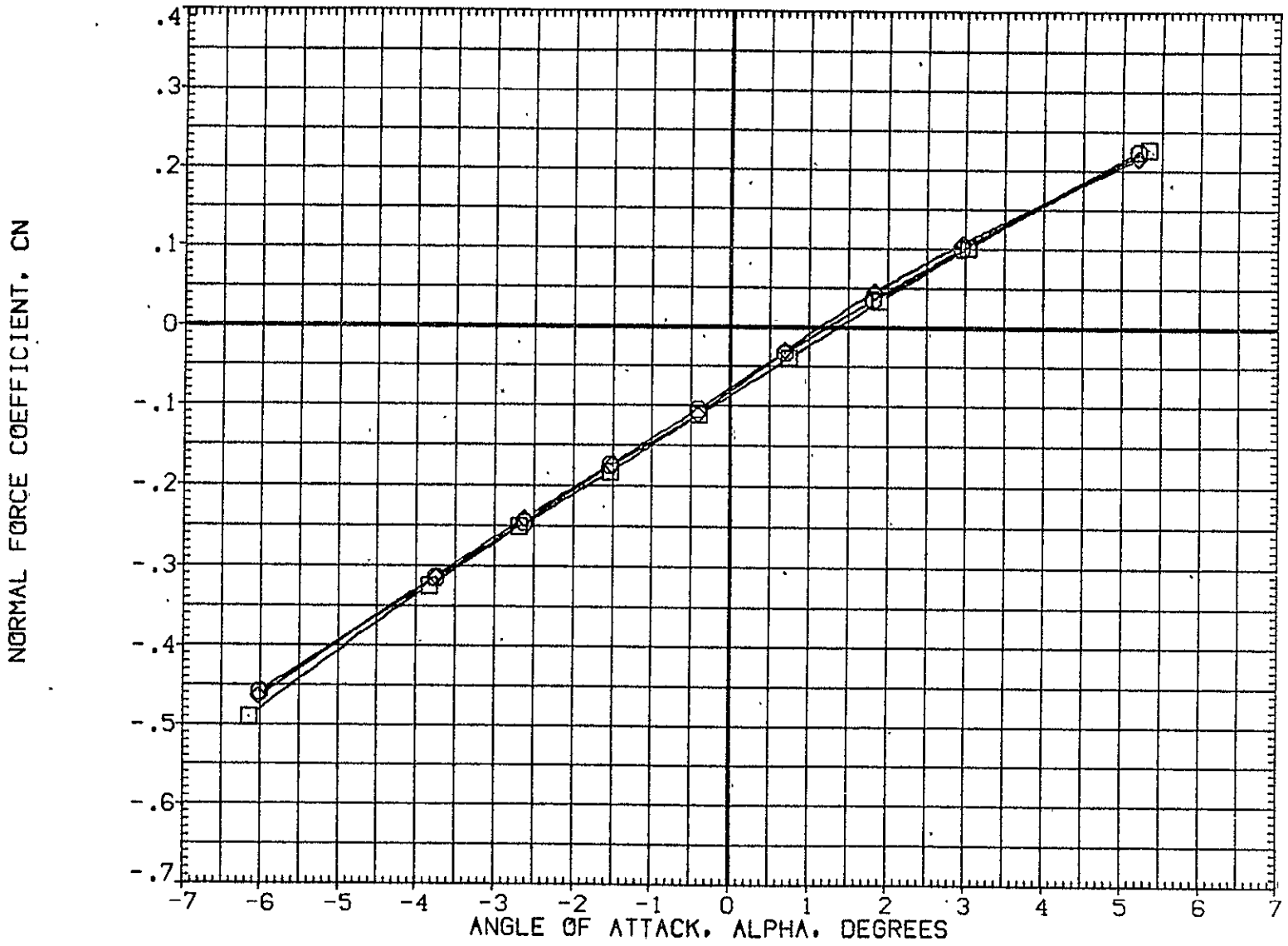
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



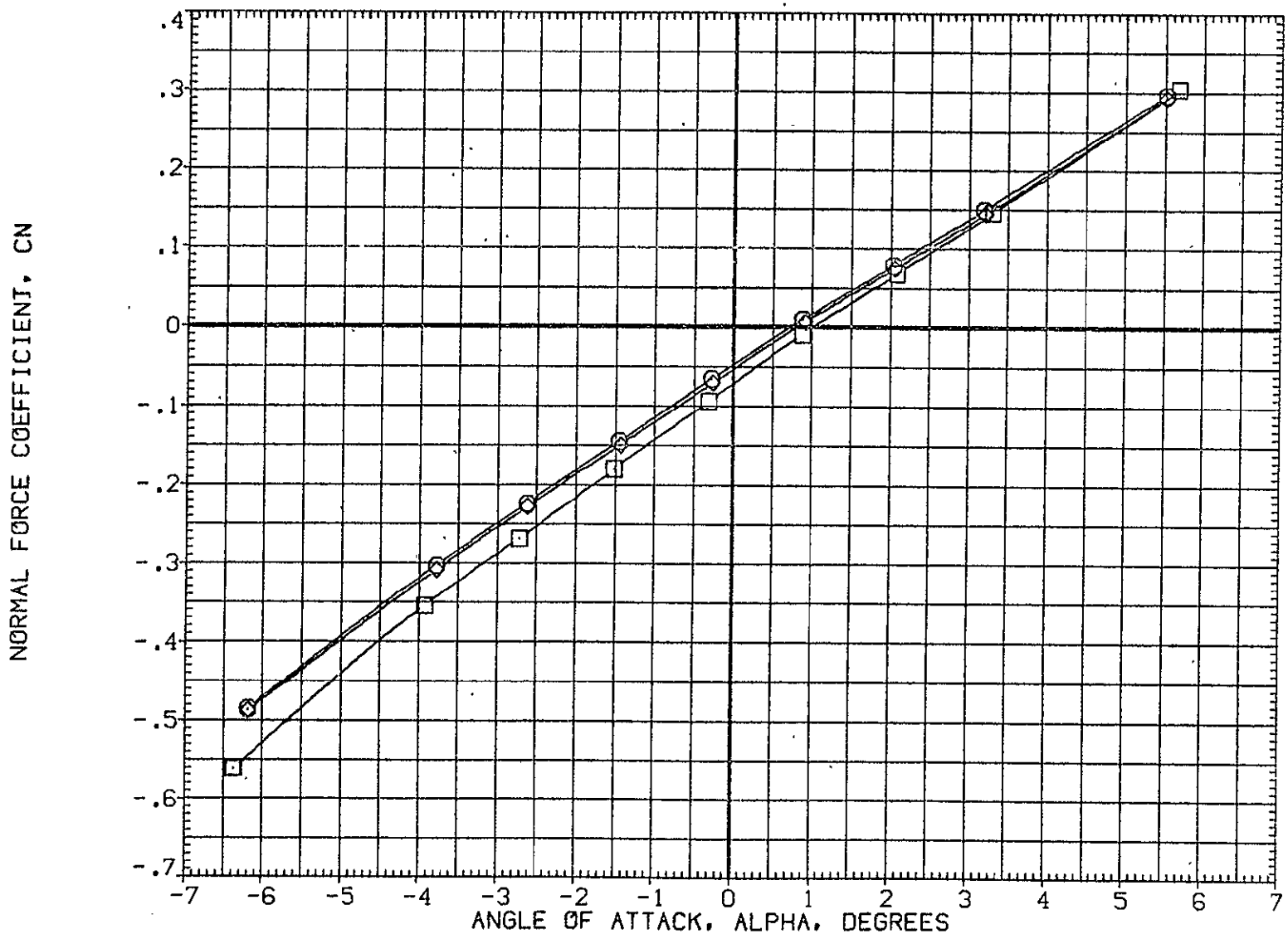
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

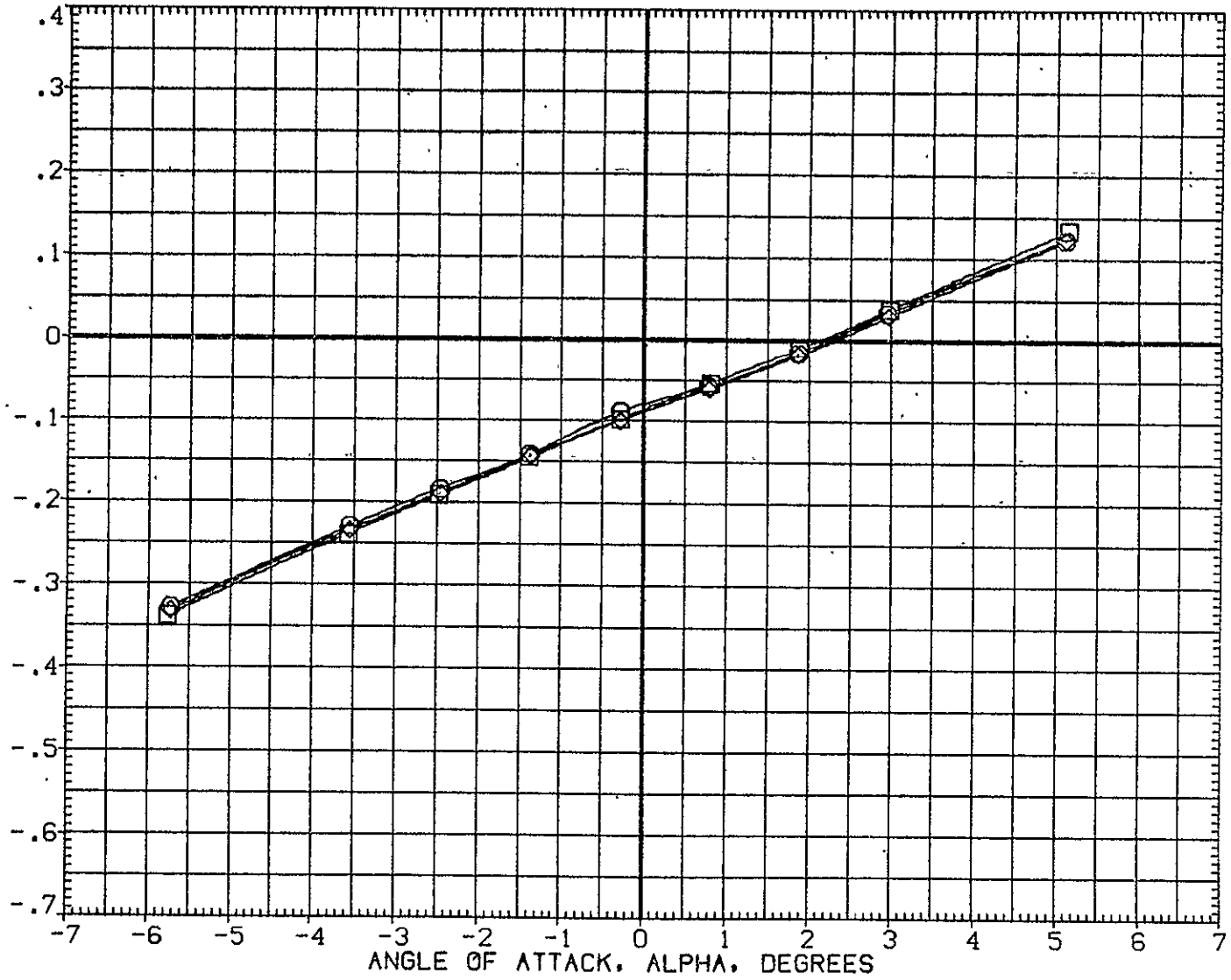
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO25)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(AILO26)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(AILO27)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

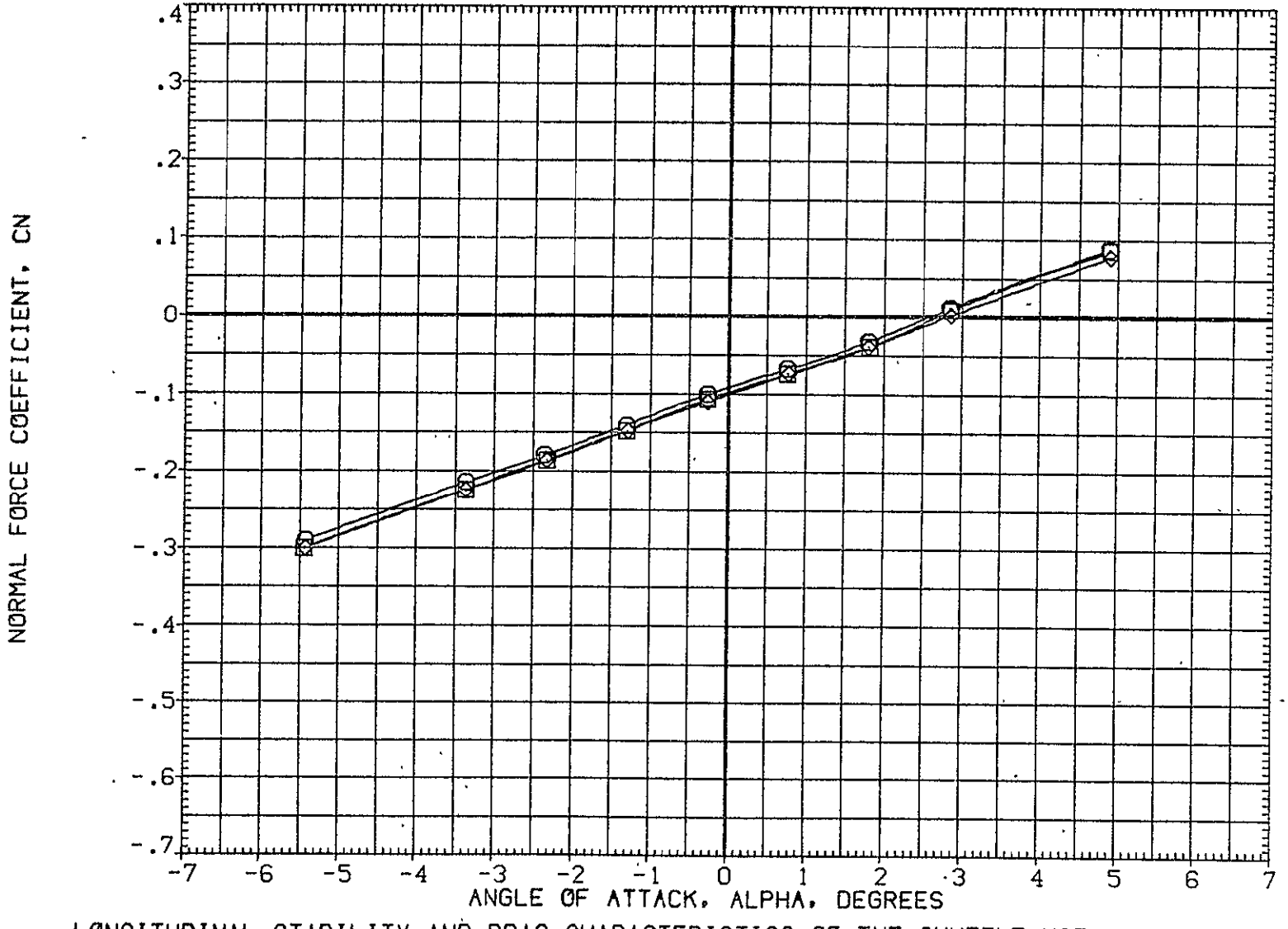


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO25)	□	MSFC TWT 600 (FA14)	01TIS1A1R1K1F14F15	.000	.000	90.000	.140
(AILO26)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1F10F11	.000	.000	90.000	.140
(AILO27)	◇□	MSFC TWT 600 (FA14)	01TIS1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN, XT
YMRP	.0000	IN, YT
ZMRP	.0000	IN, ZT
SCALE	.0040	



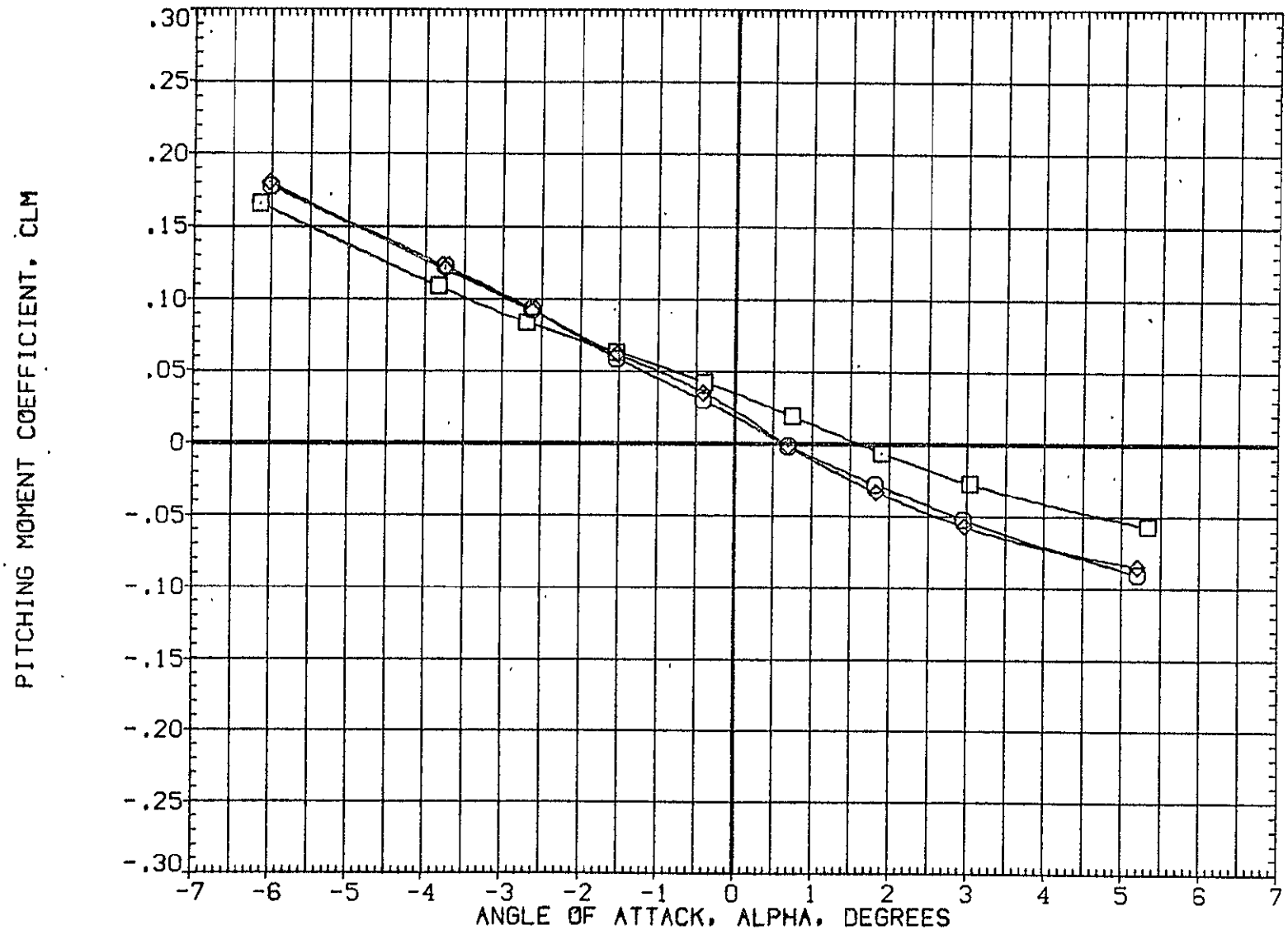
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

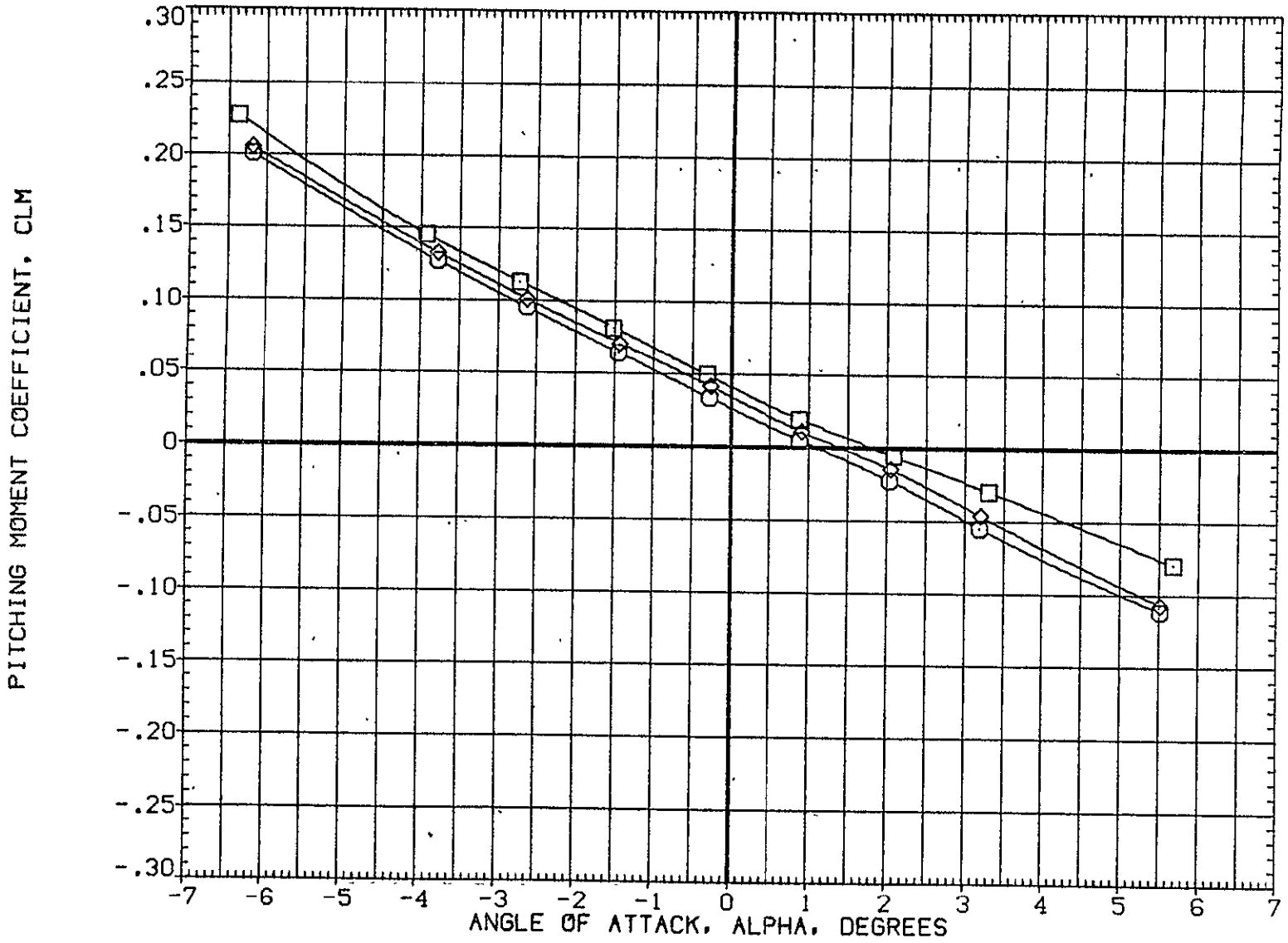


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO25)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(AILO26)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(AILO27)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000.	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

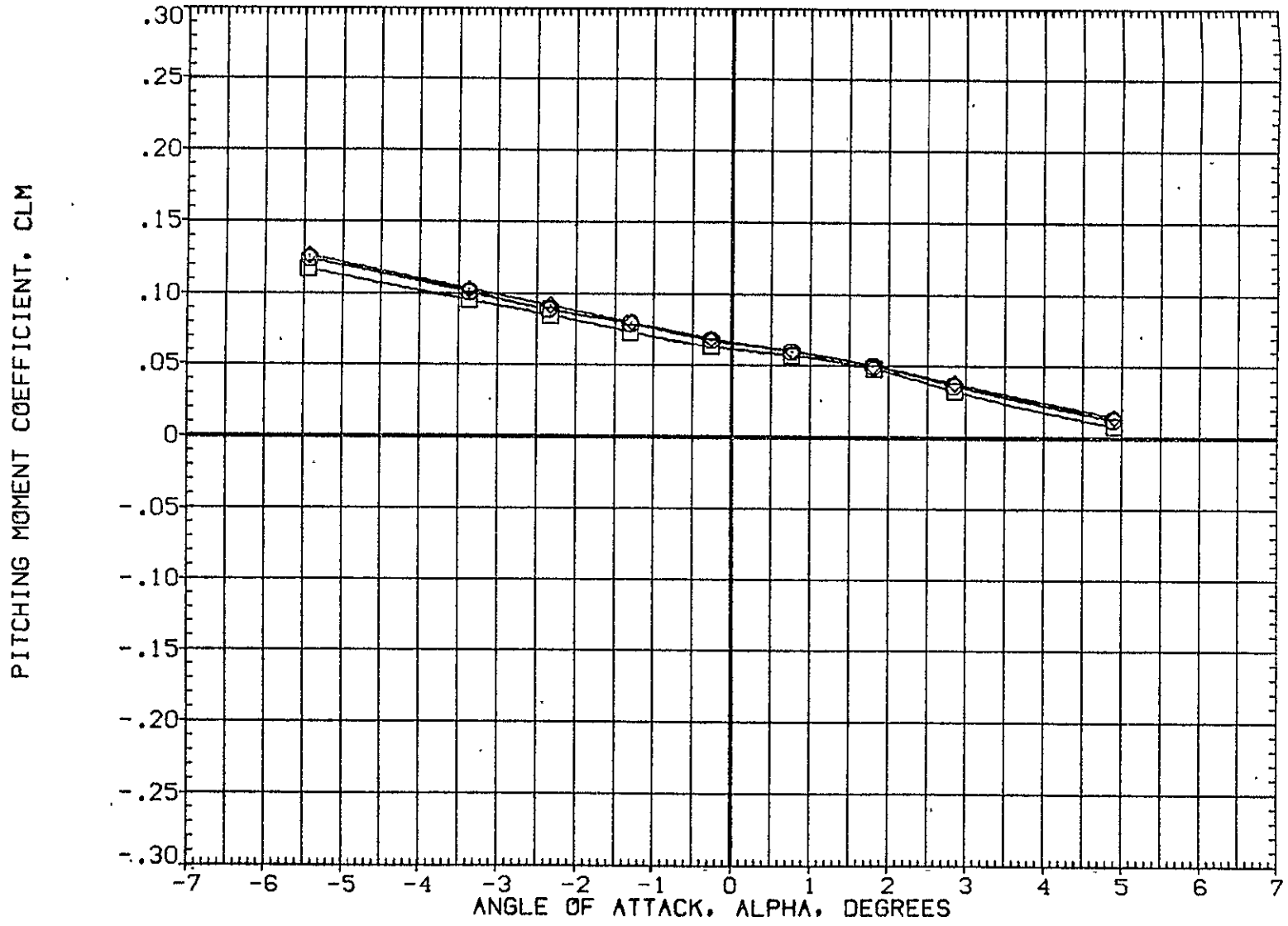


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO25)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(AILO26)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(AILO27)	◇	MSFC TWT 600-(FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



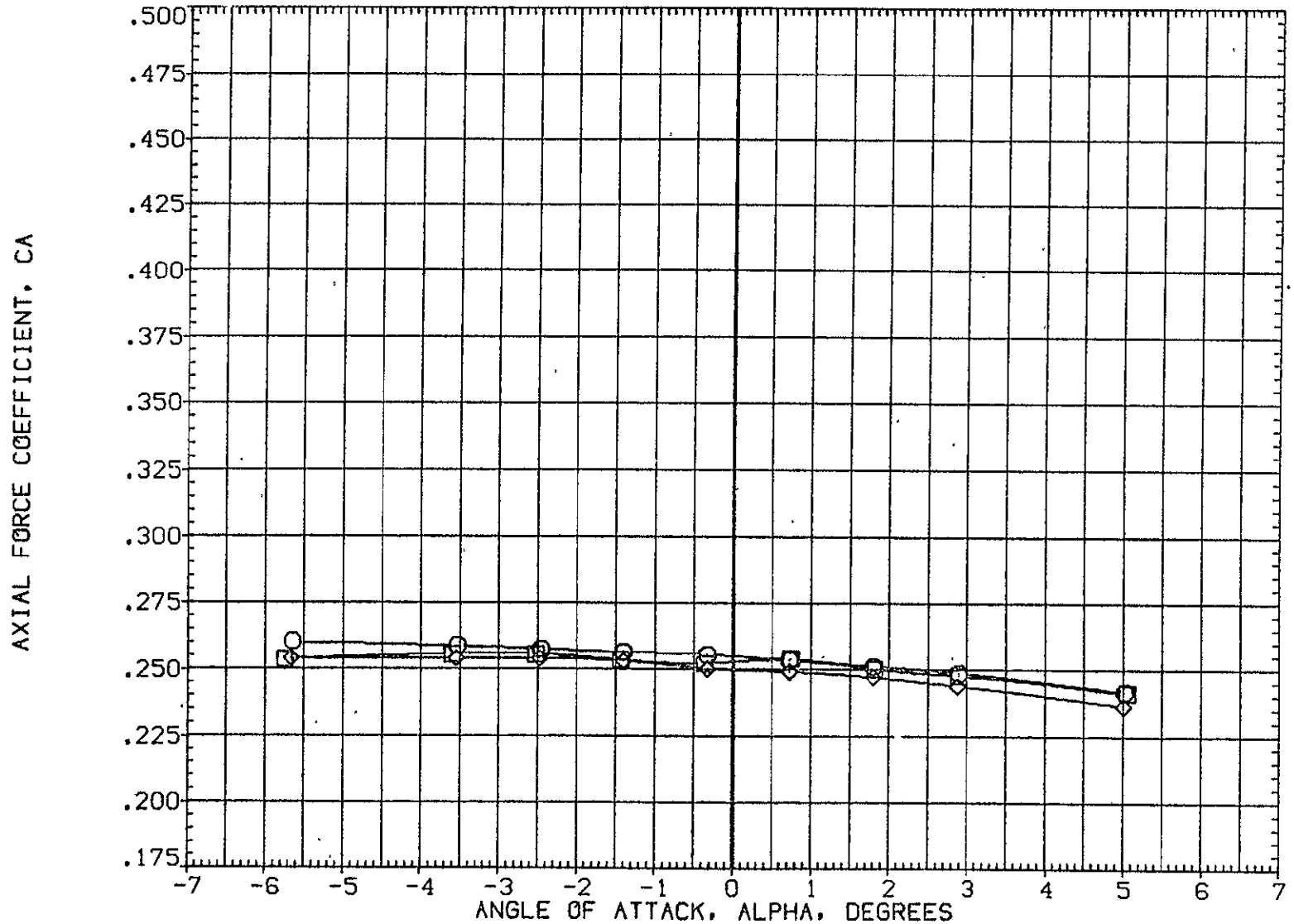
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

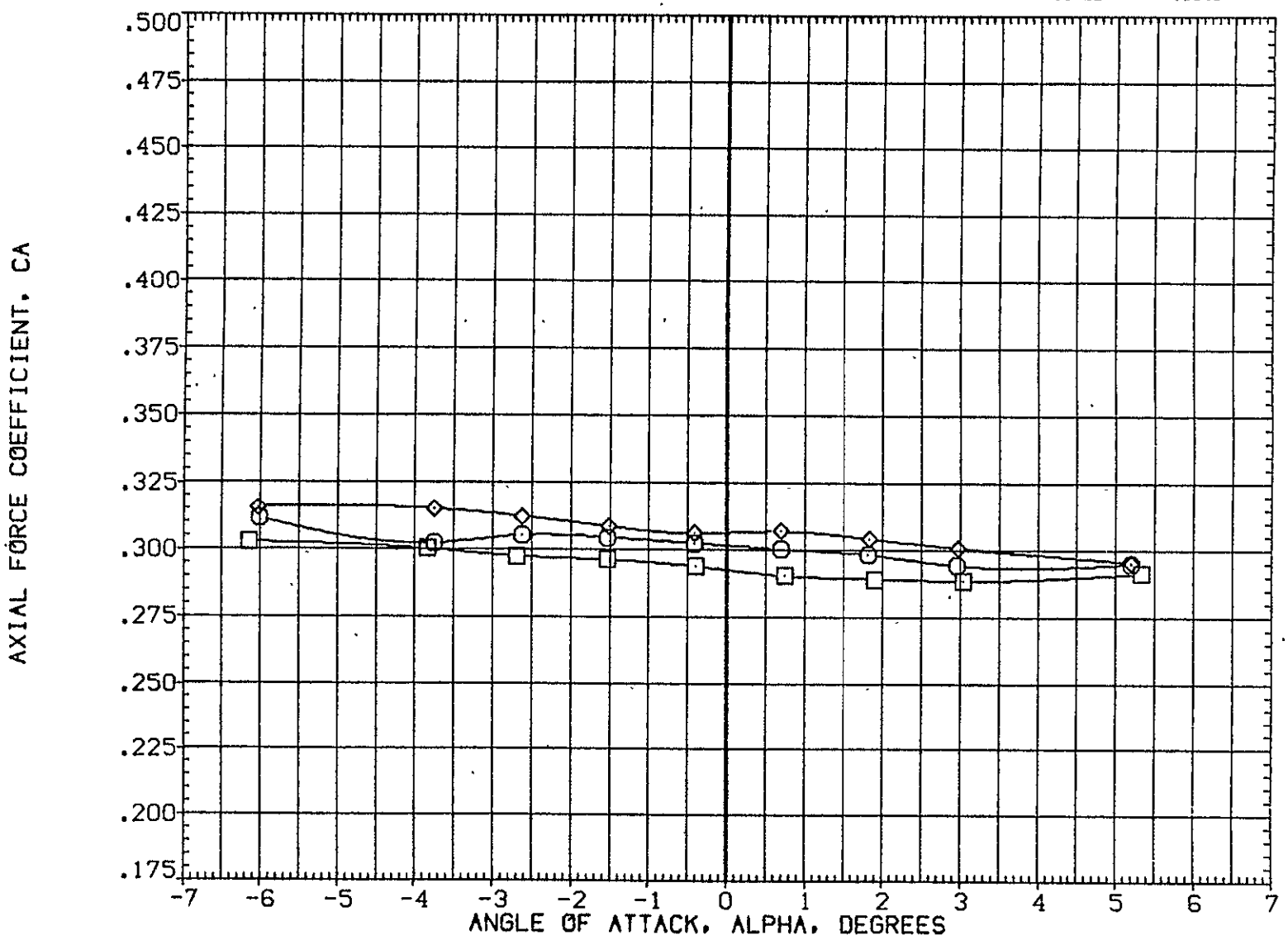


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

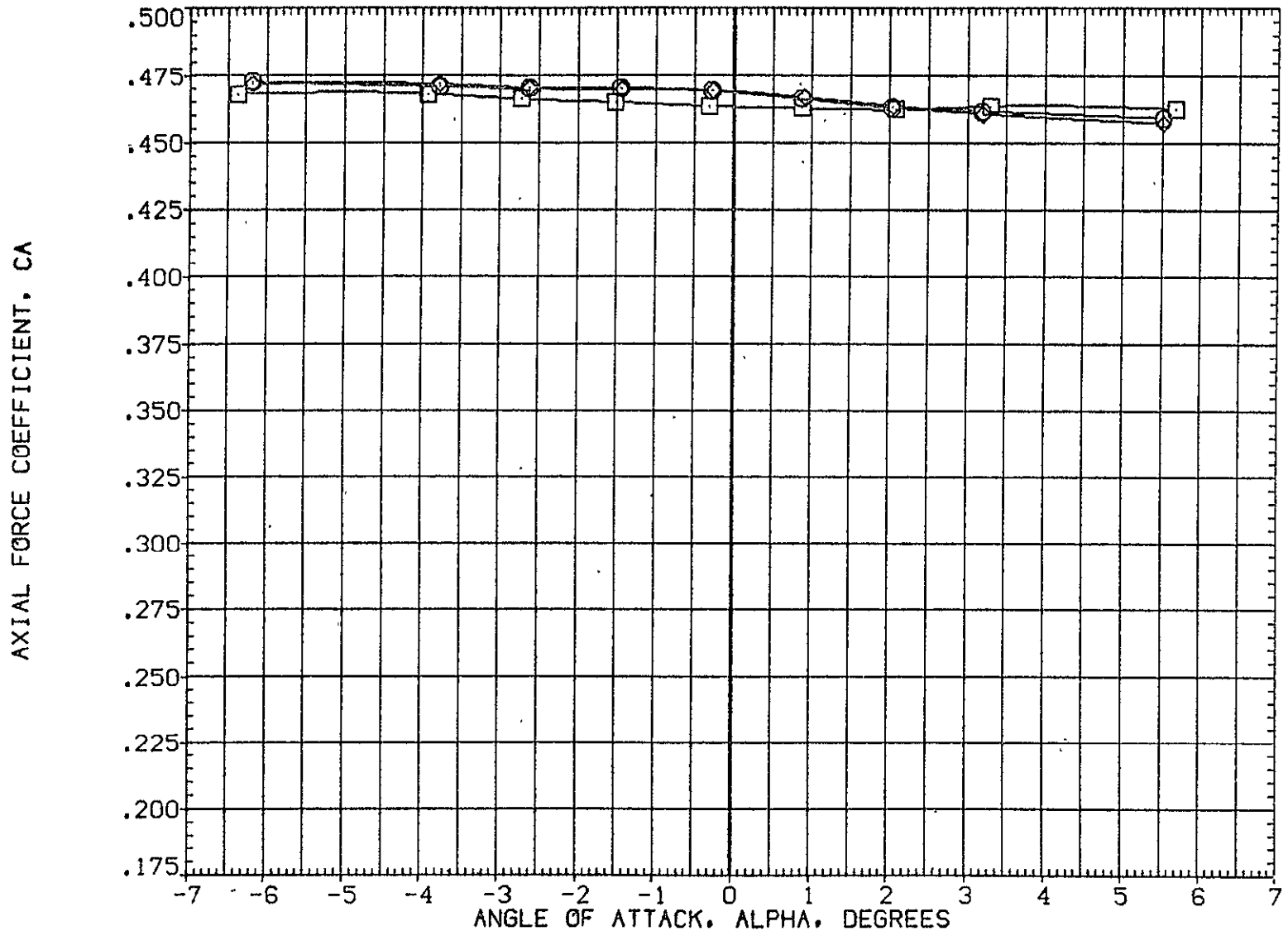


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	▢	MSFC TWT 600 (FA14)	01TIS1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	▢	MSFC TWT 600 (FA14)	01TIS1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	



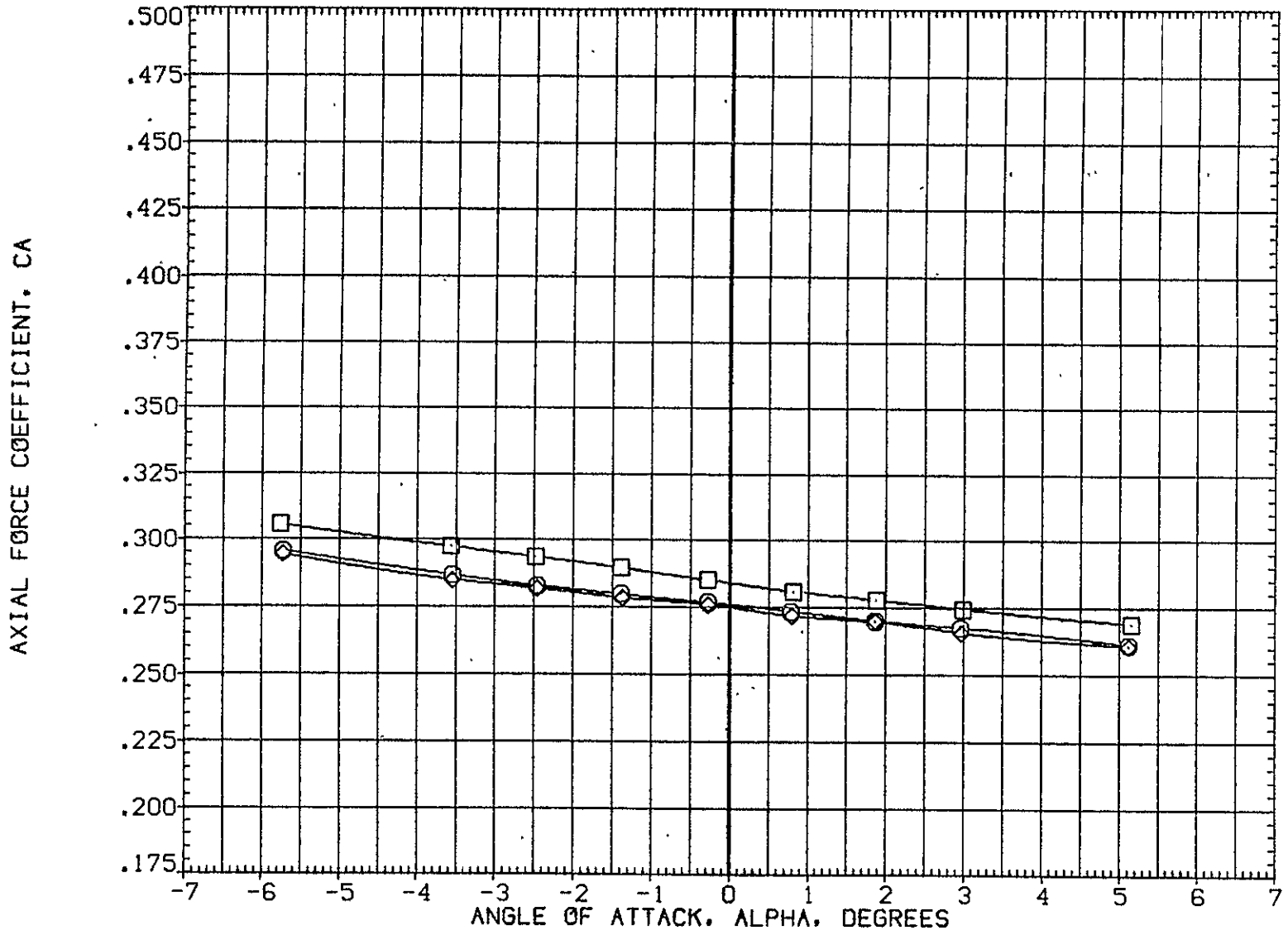
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ØRBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	0!T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	0!T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	0!T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

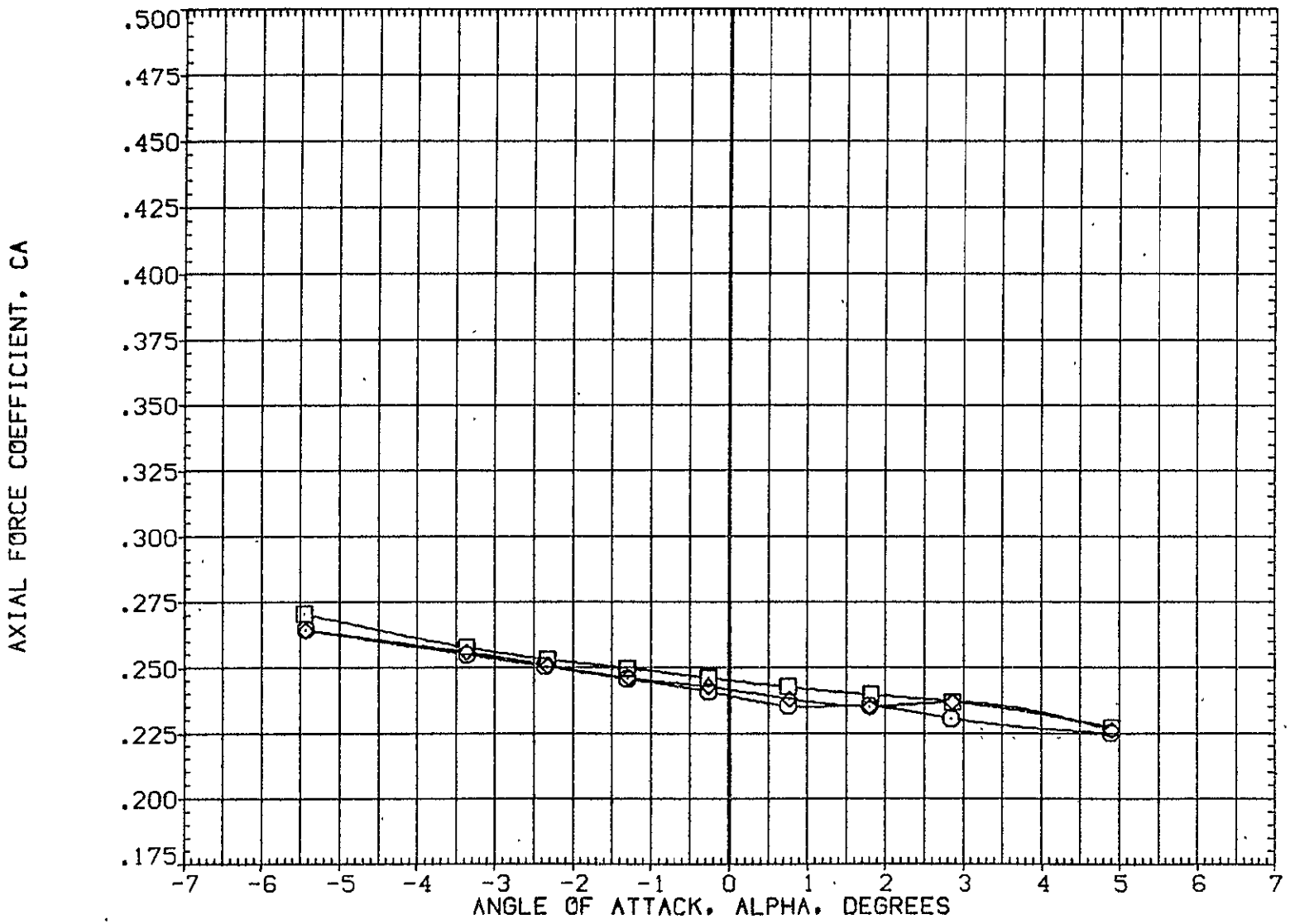


LØNGITUDINAL STABILITY AND DRAG CHARACTERISTICS ØF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	-.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

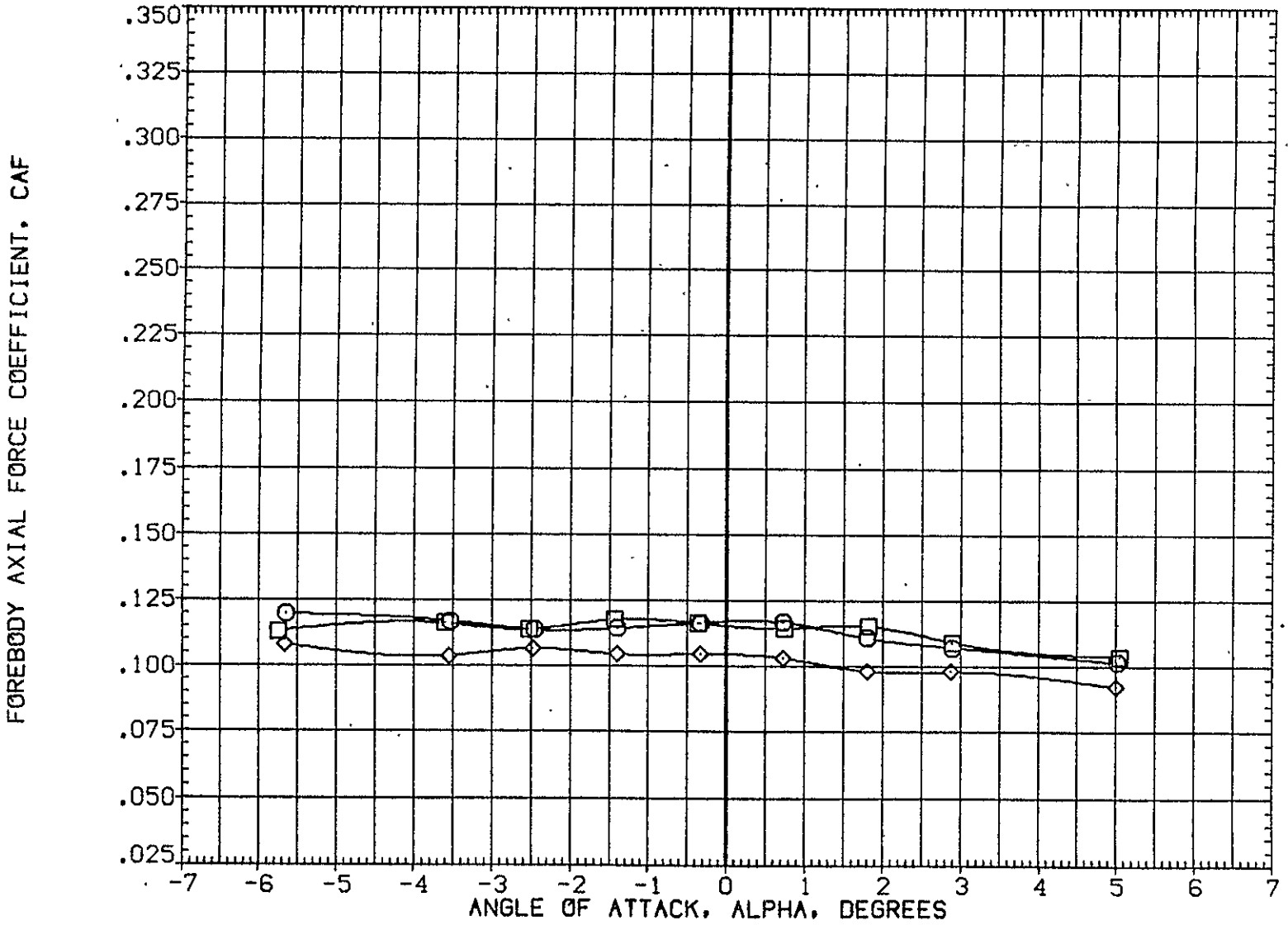


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



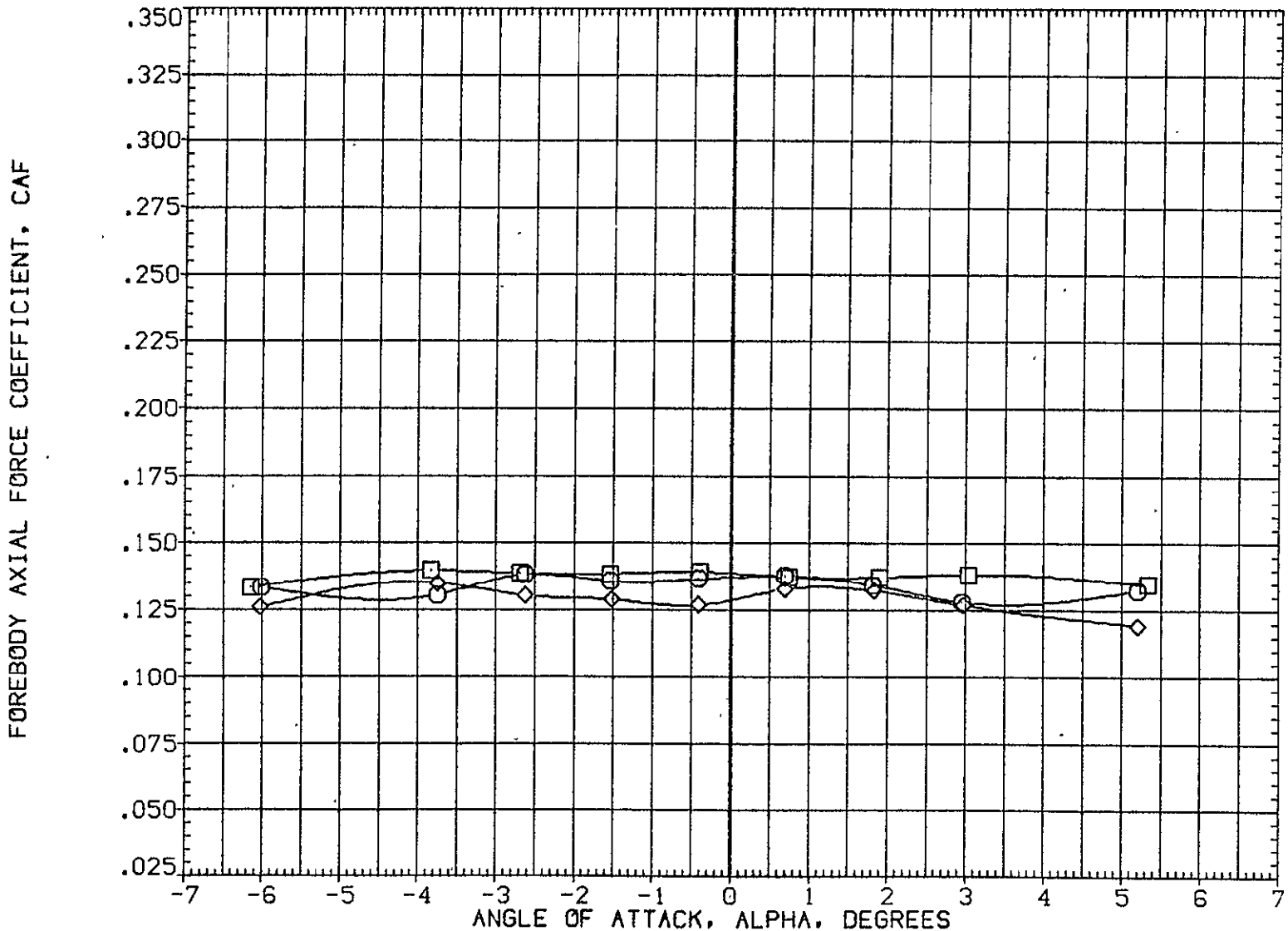
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL025)	□	MSFC TWT 600 (FA14)	01TIS1A1R1K1F14F15	.000	.000	90.000	.140
(AIL026)	◇□	MSFC TWT 600 (FA14)	01TIS1A1R1K1F10F11	.000	.000	90.000	.140
(AIL027)	◇	MSFC TWT 600 (FA14)	01TIS1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

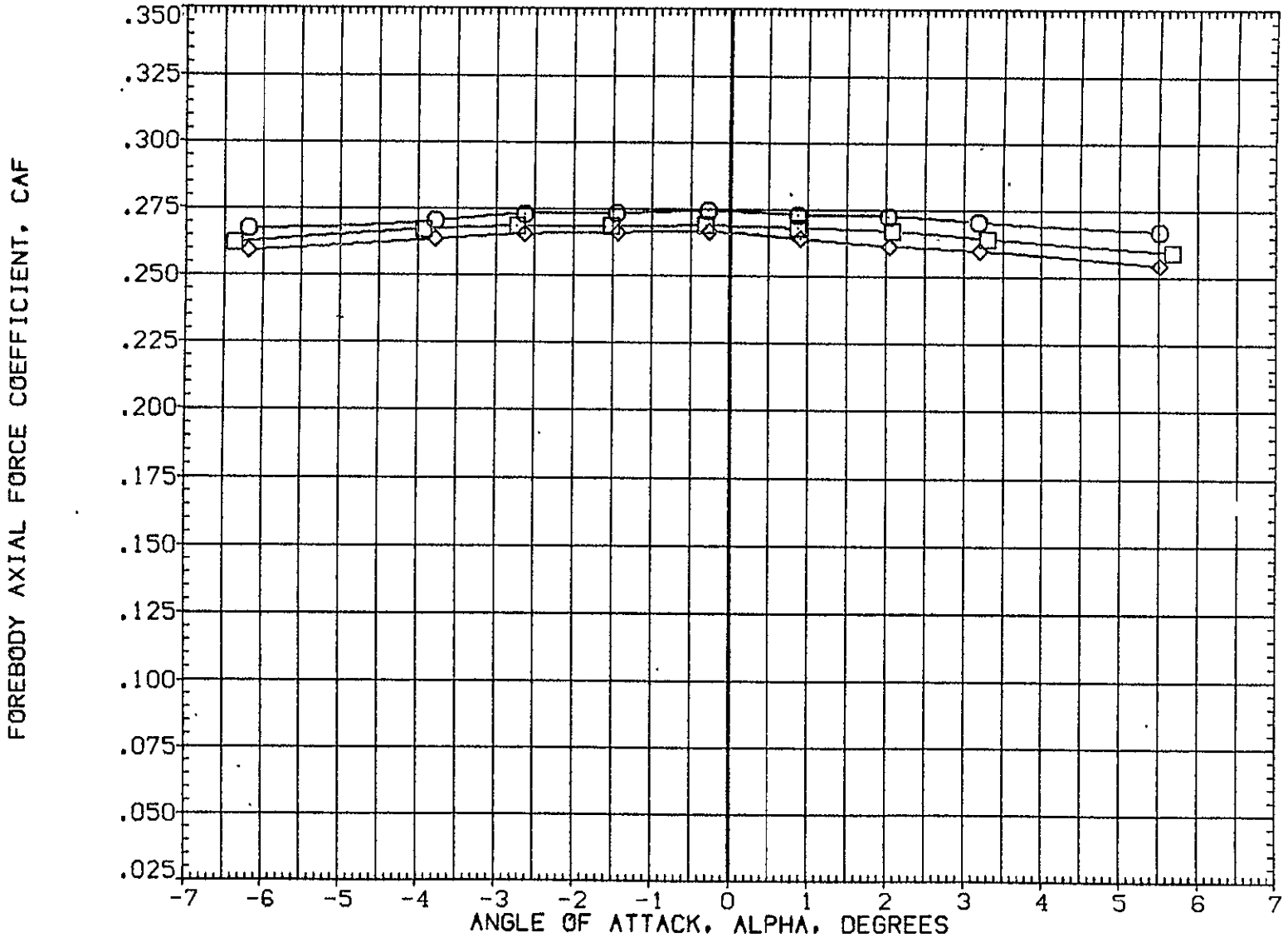


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

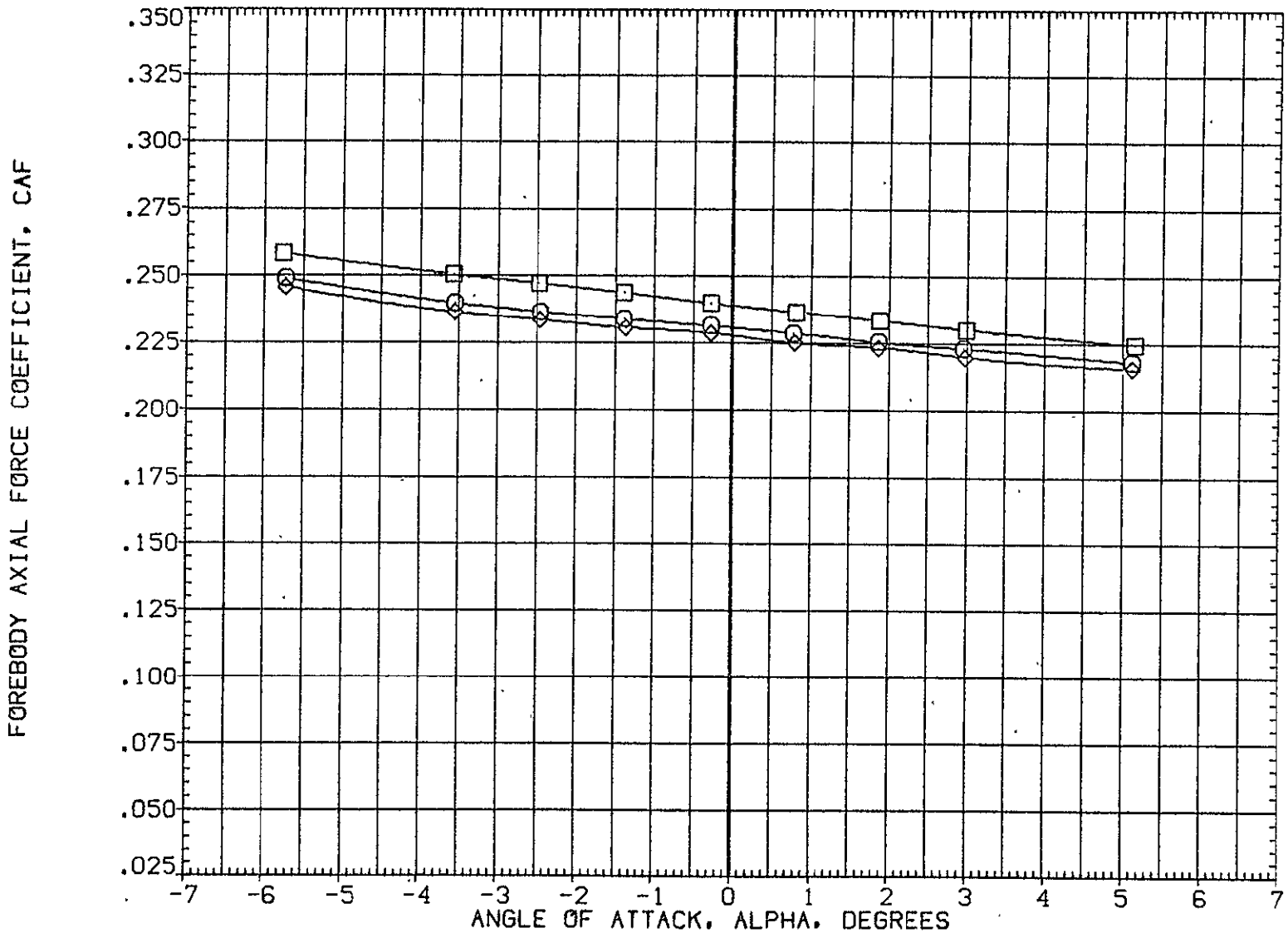


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

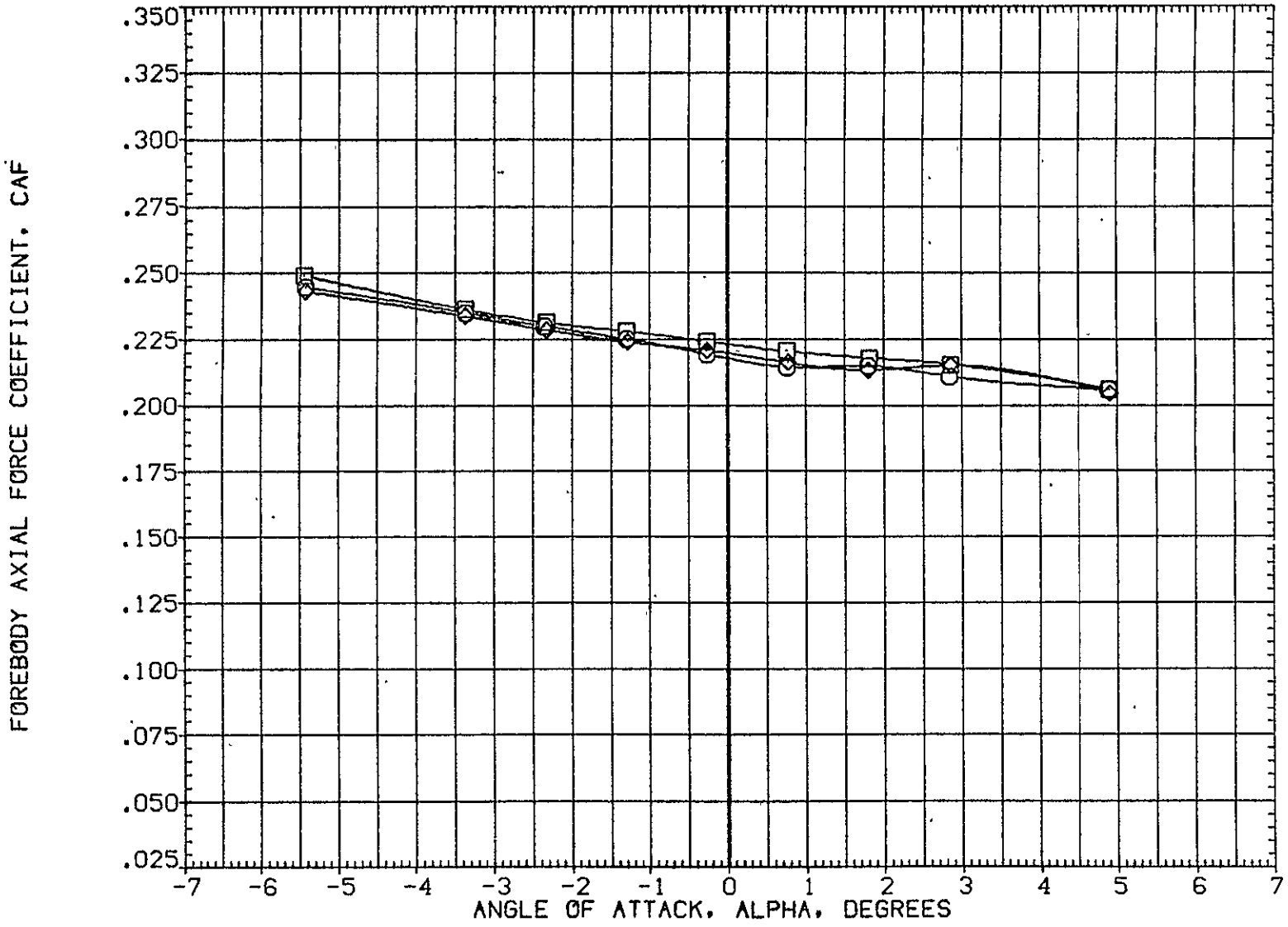


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L025)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

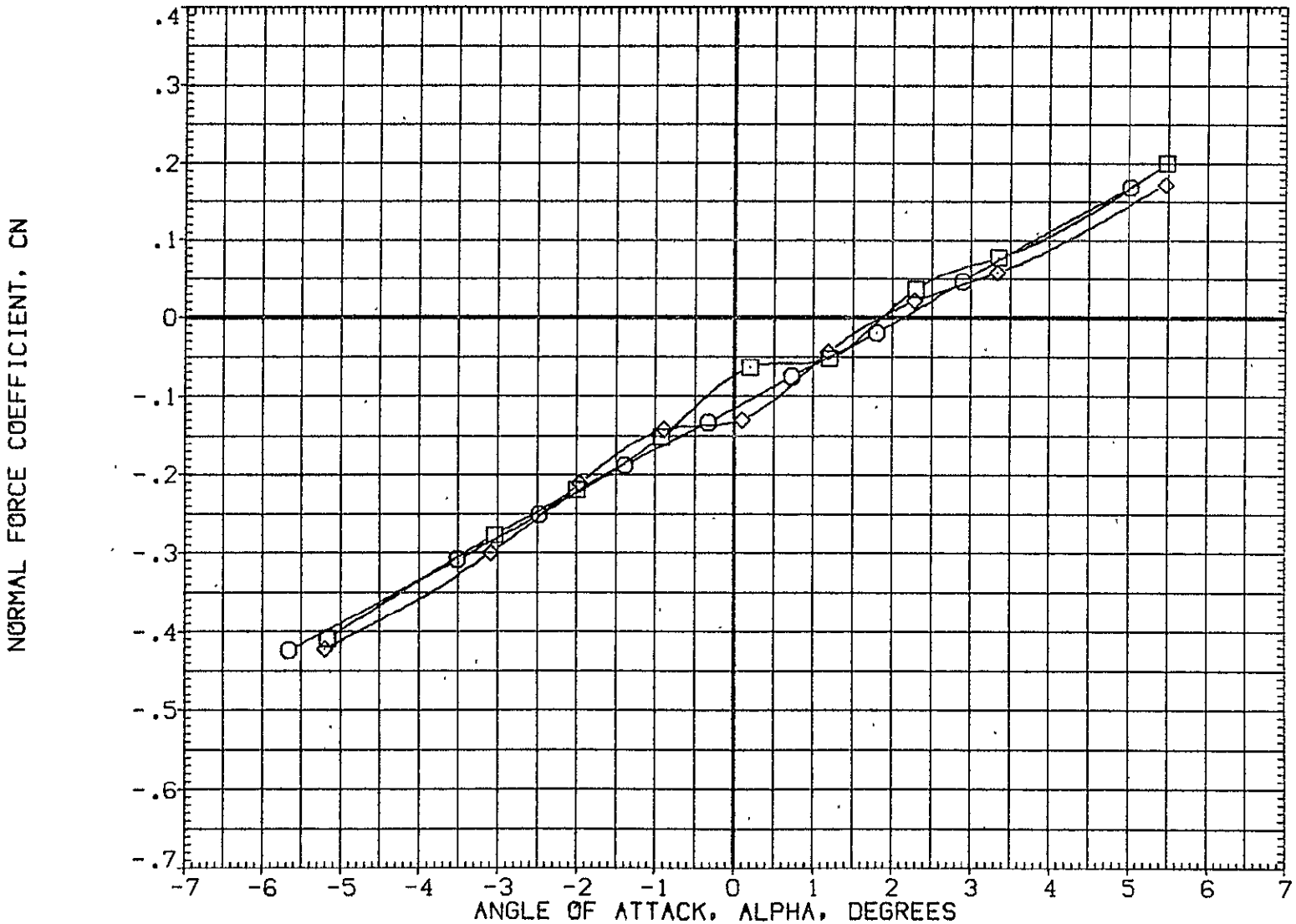


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

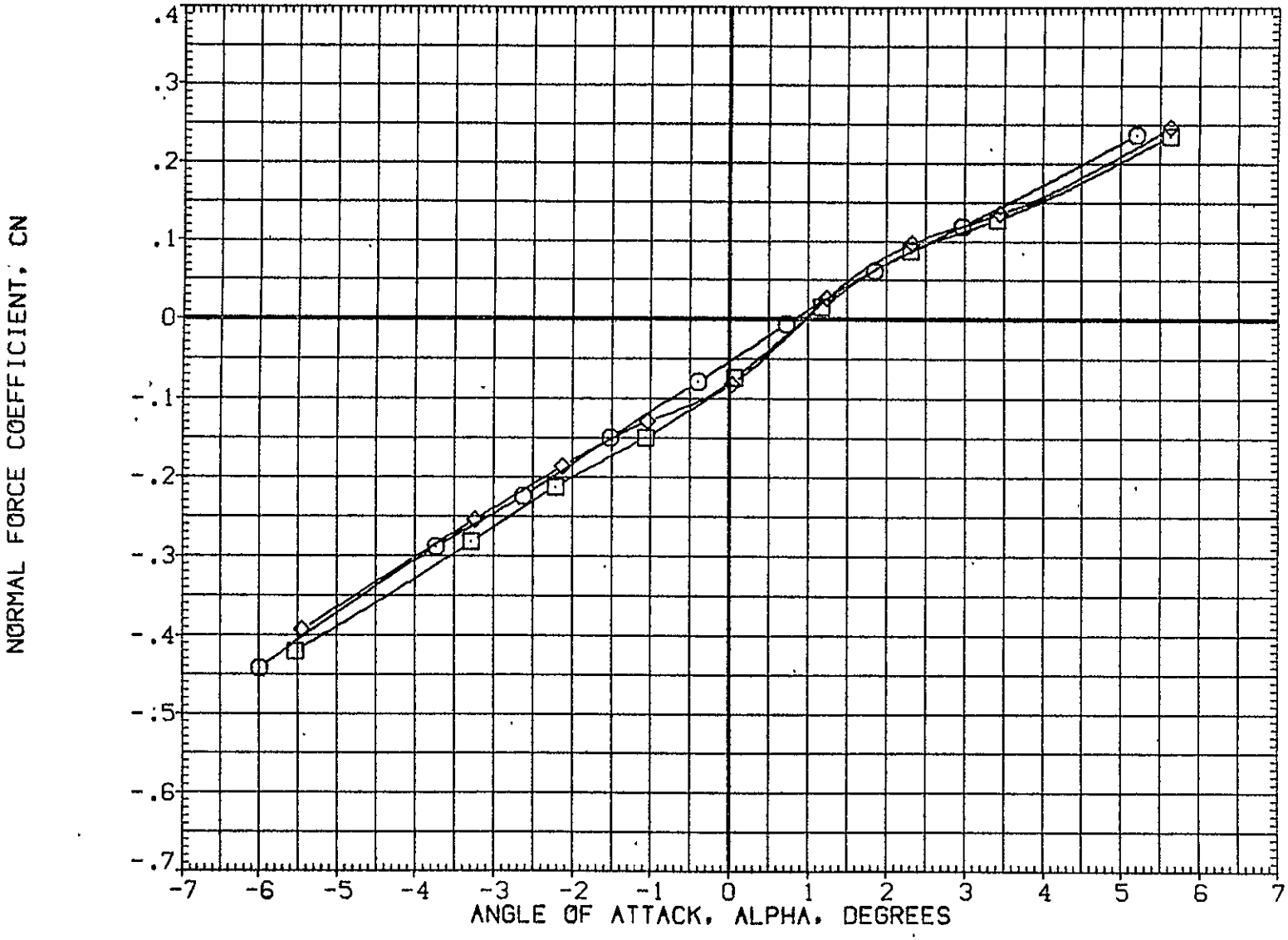


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

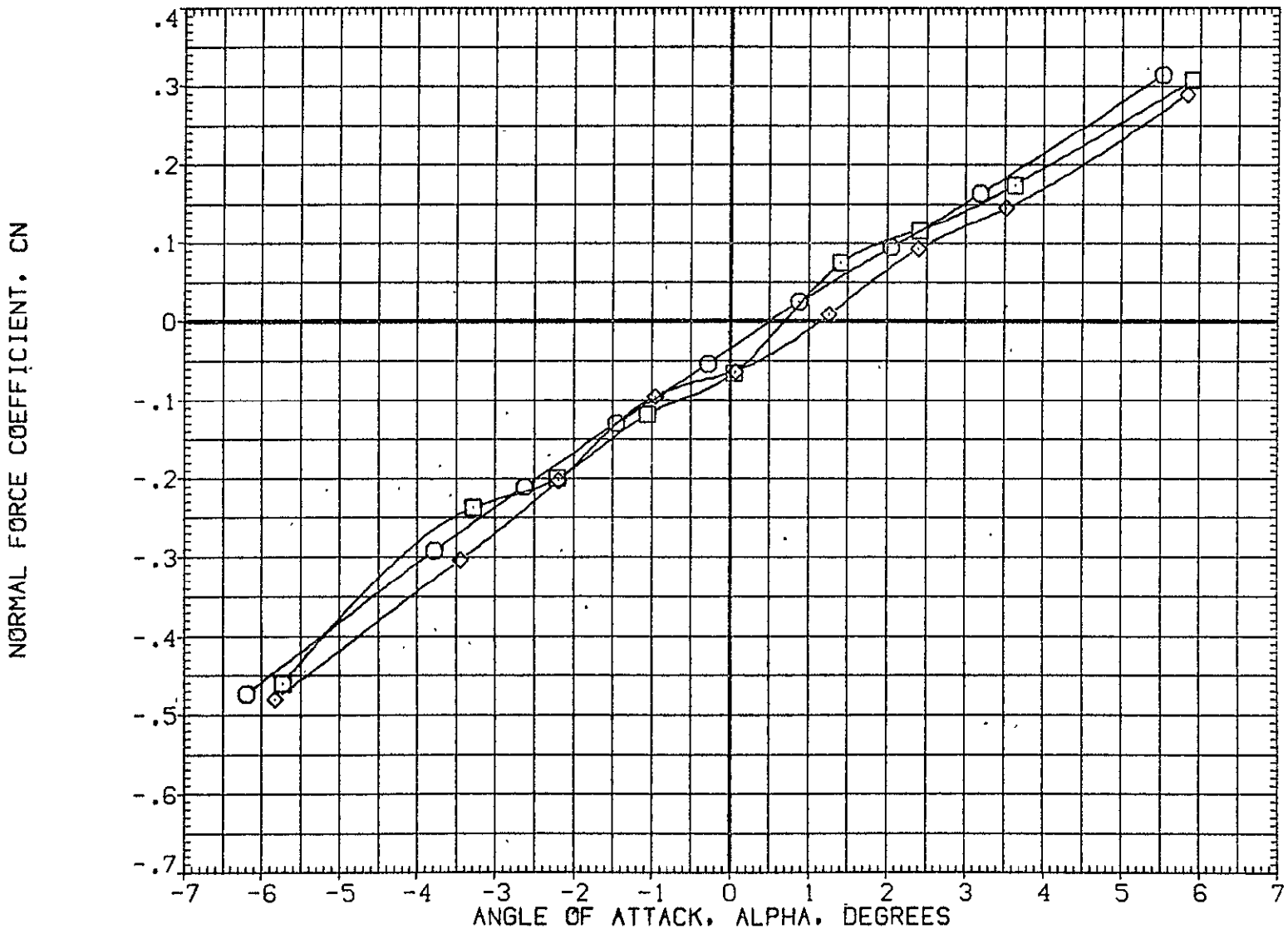


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL028)	○	MSFC TWT 600 (FA14)	01TIS1AIR1K1PS14	.000	.000	90.000	.140
(AIL029)	□	MSFC TWT 600 (FA14)	02TIS1AIR1K1	.000	.000	90.000	.140
(AIL030)	◇	MSFC TWT 600 (FA14)	02TIS1AIR1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

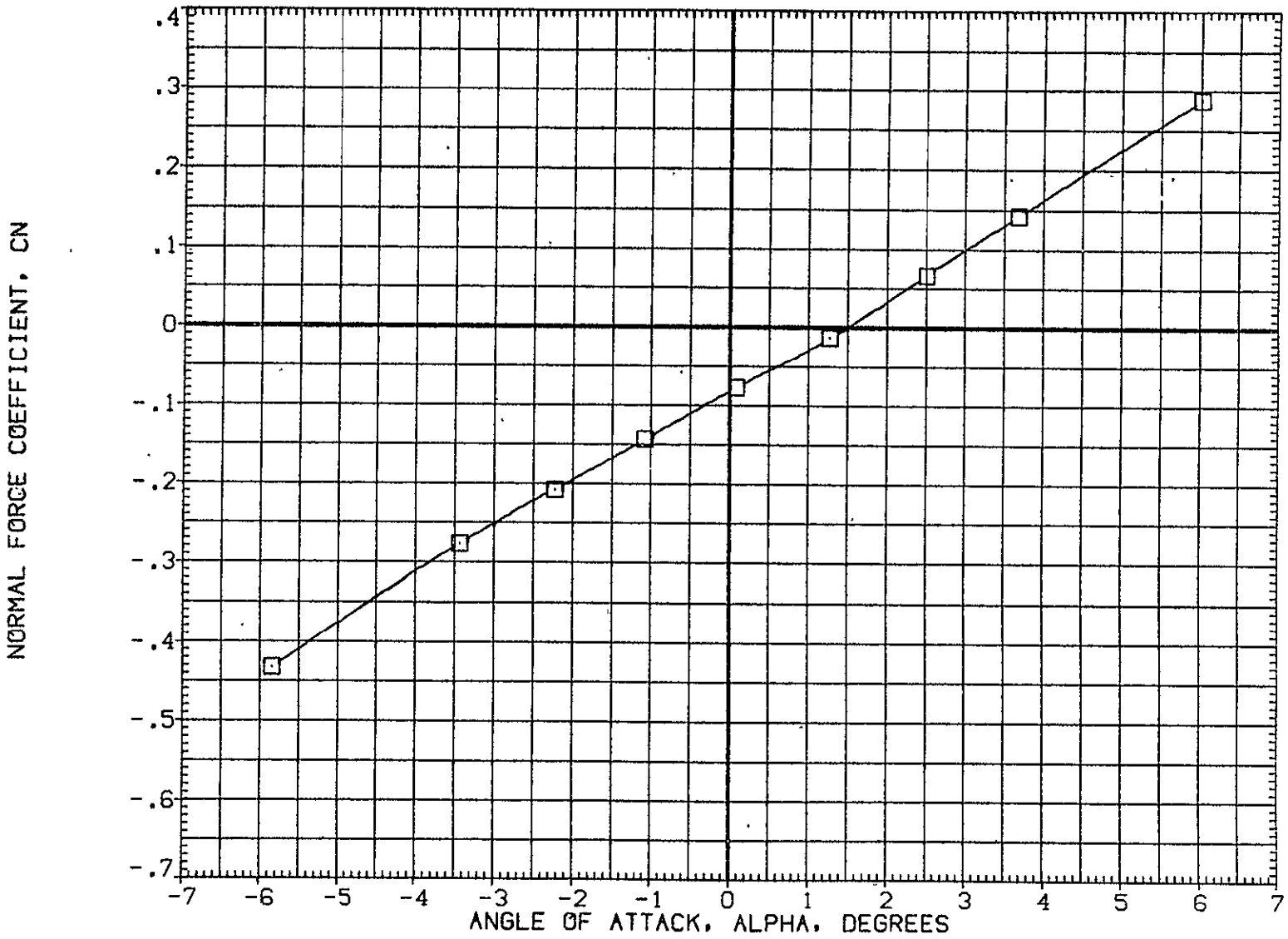


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)		DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

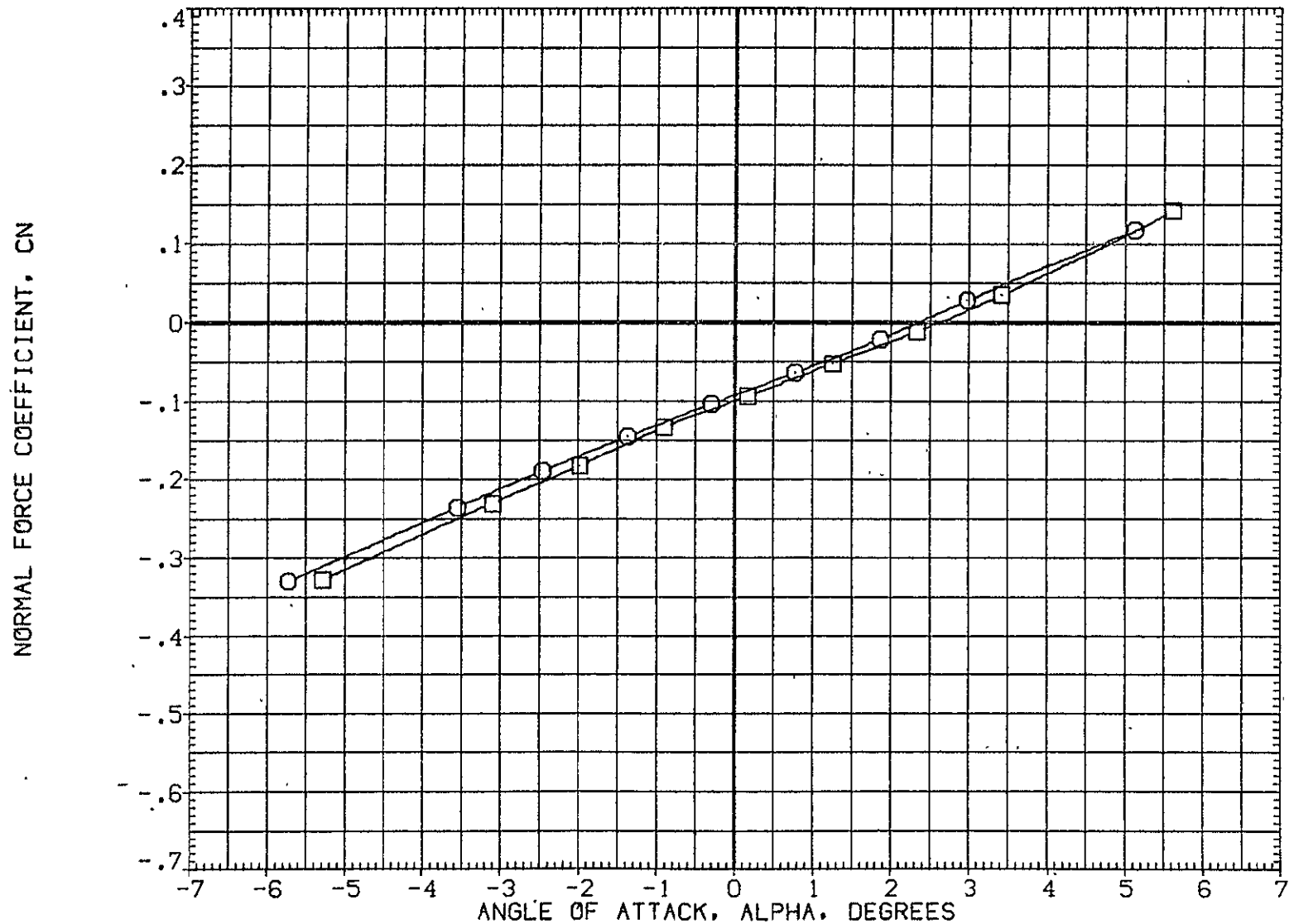


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)		MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)		DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

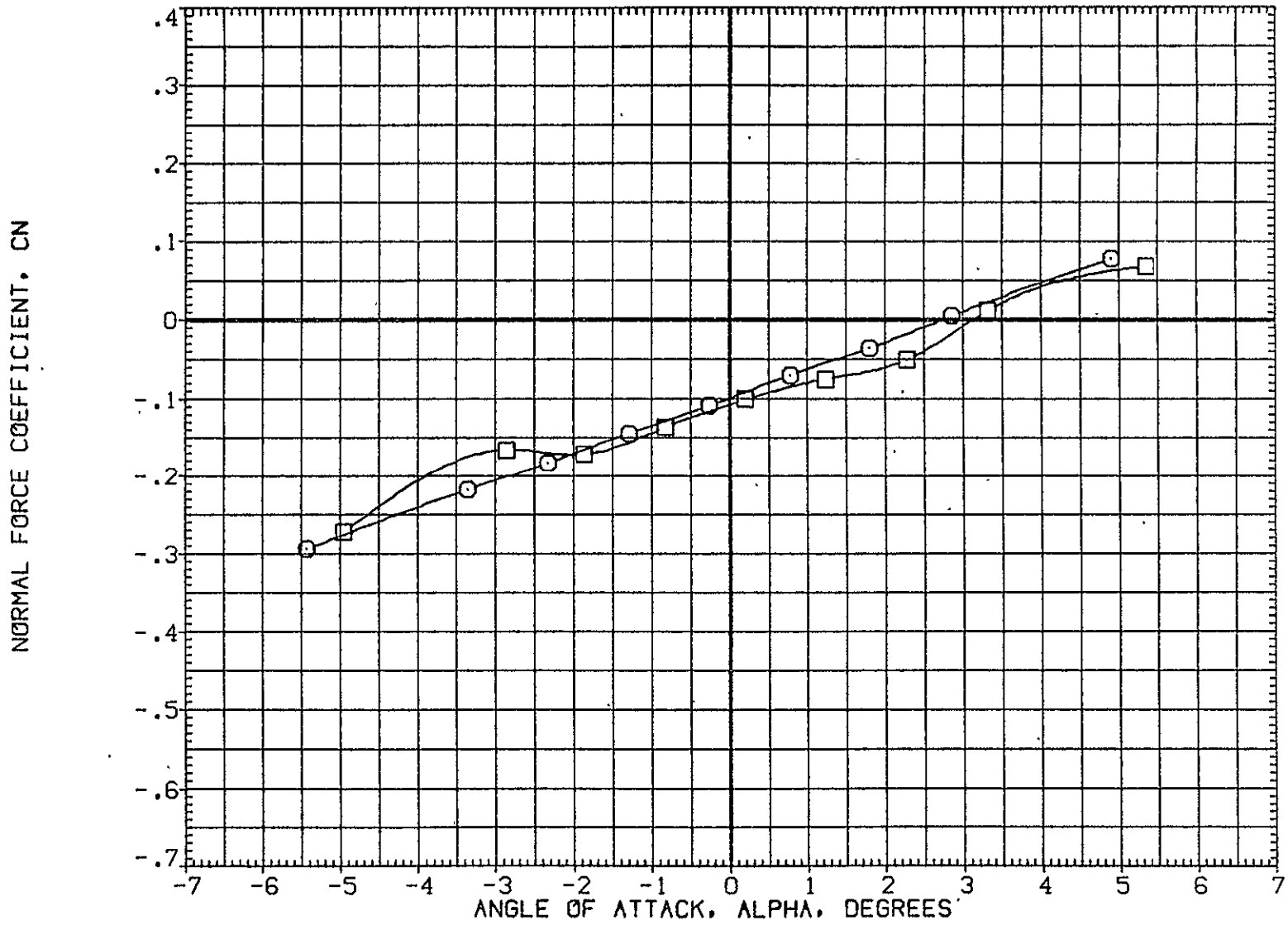


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

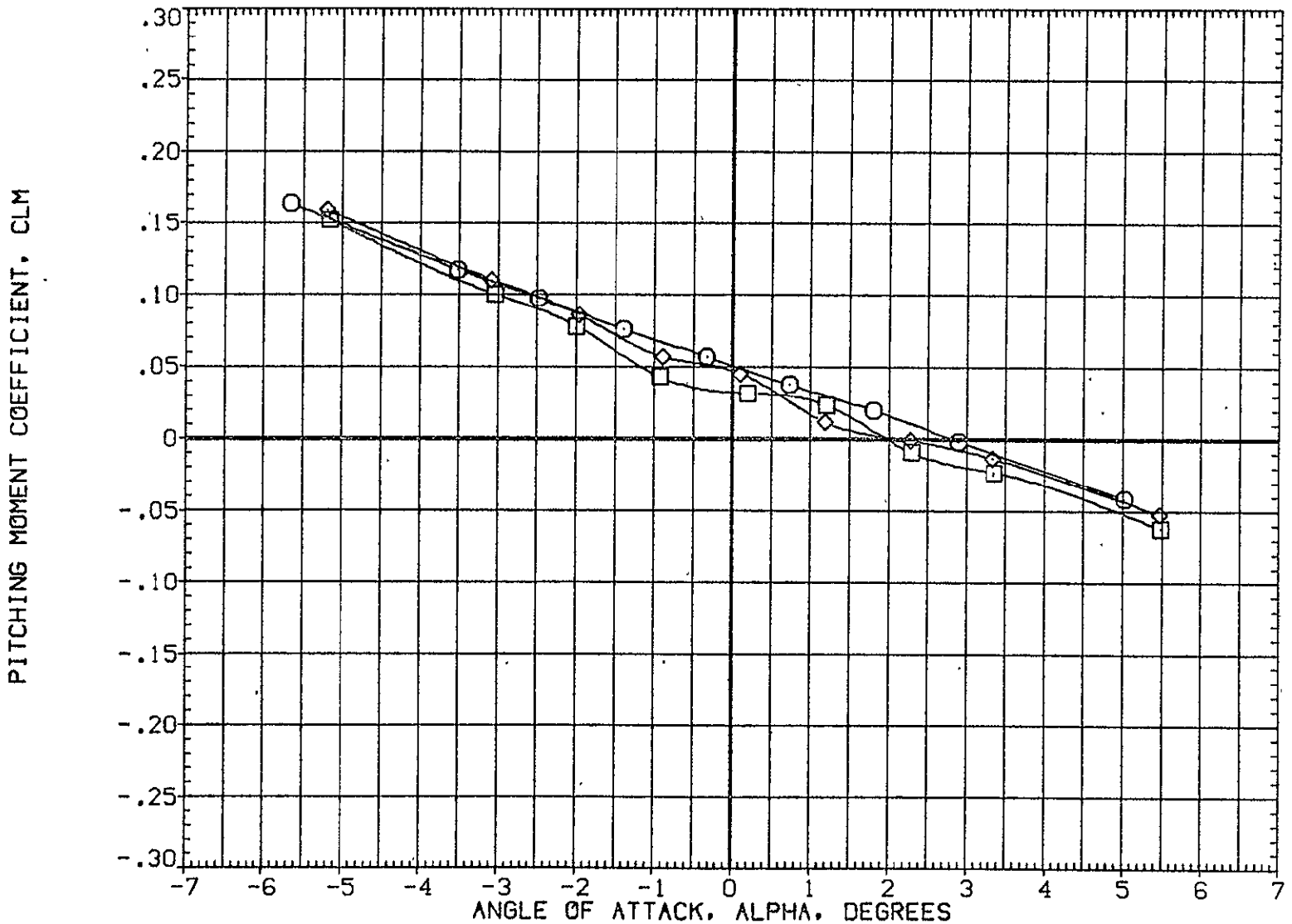


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

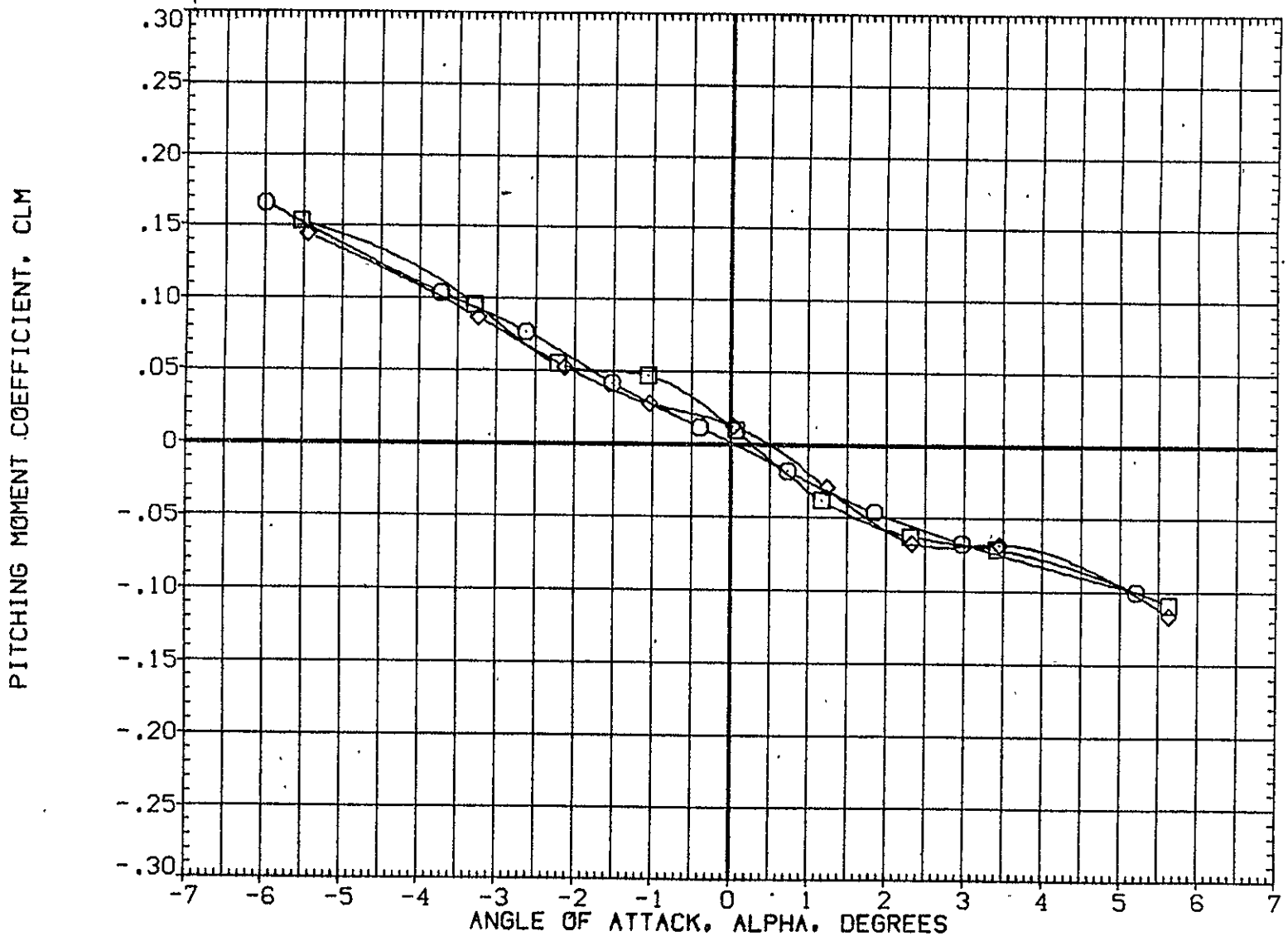


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(AIL029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AIL030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

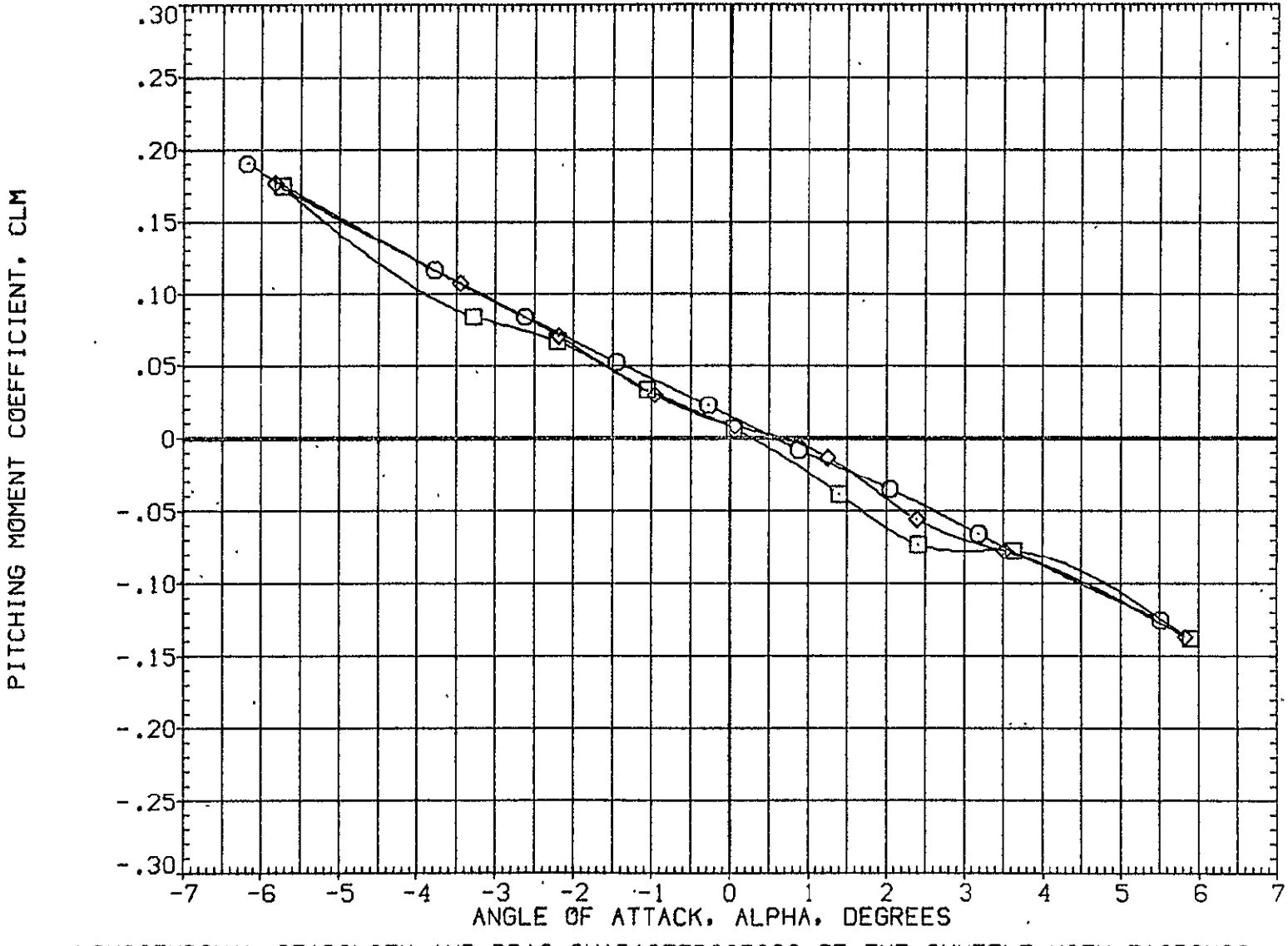


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO28)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1LO29)	▽	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1LO30)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

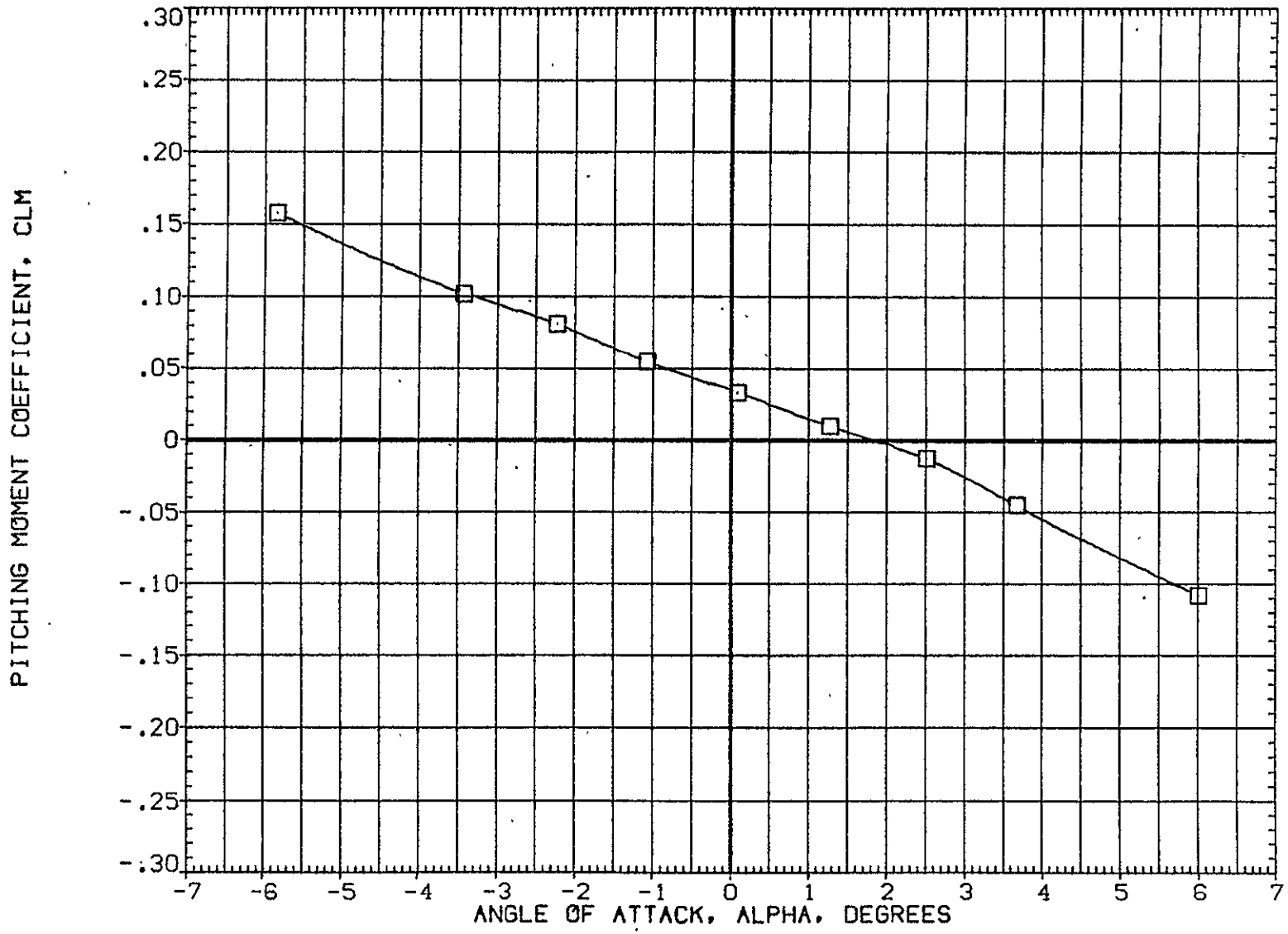


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)		DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

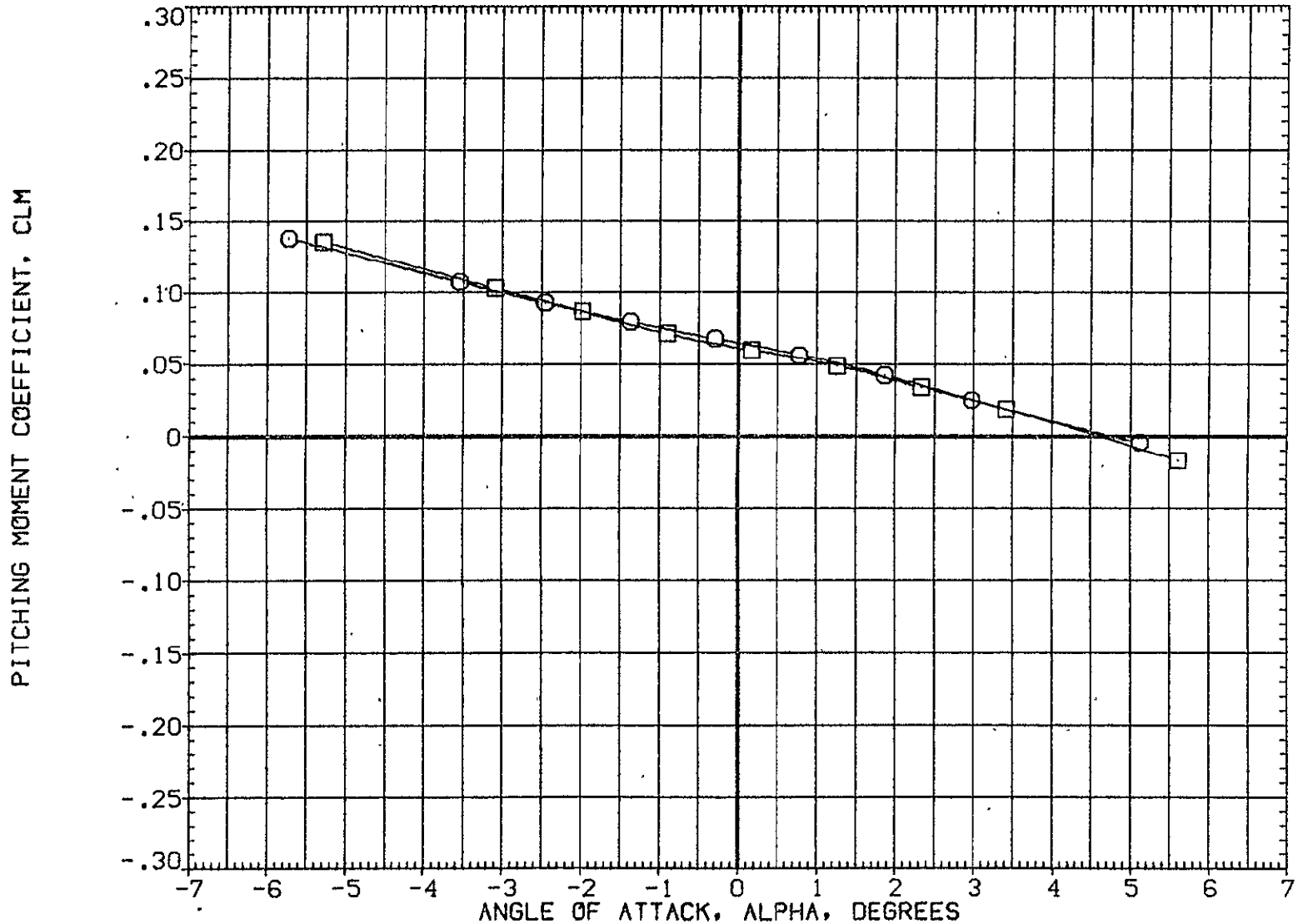


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	MSFC TWT 600 (FA14)	01TIS1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02TIS1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

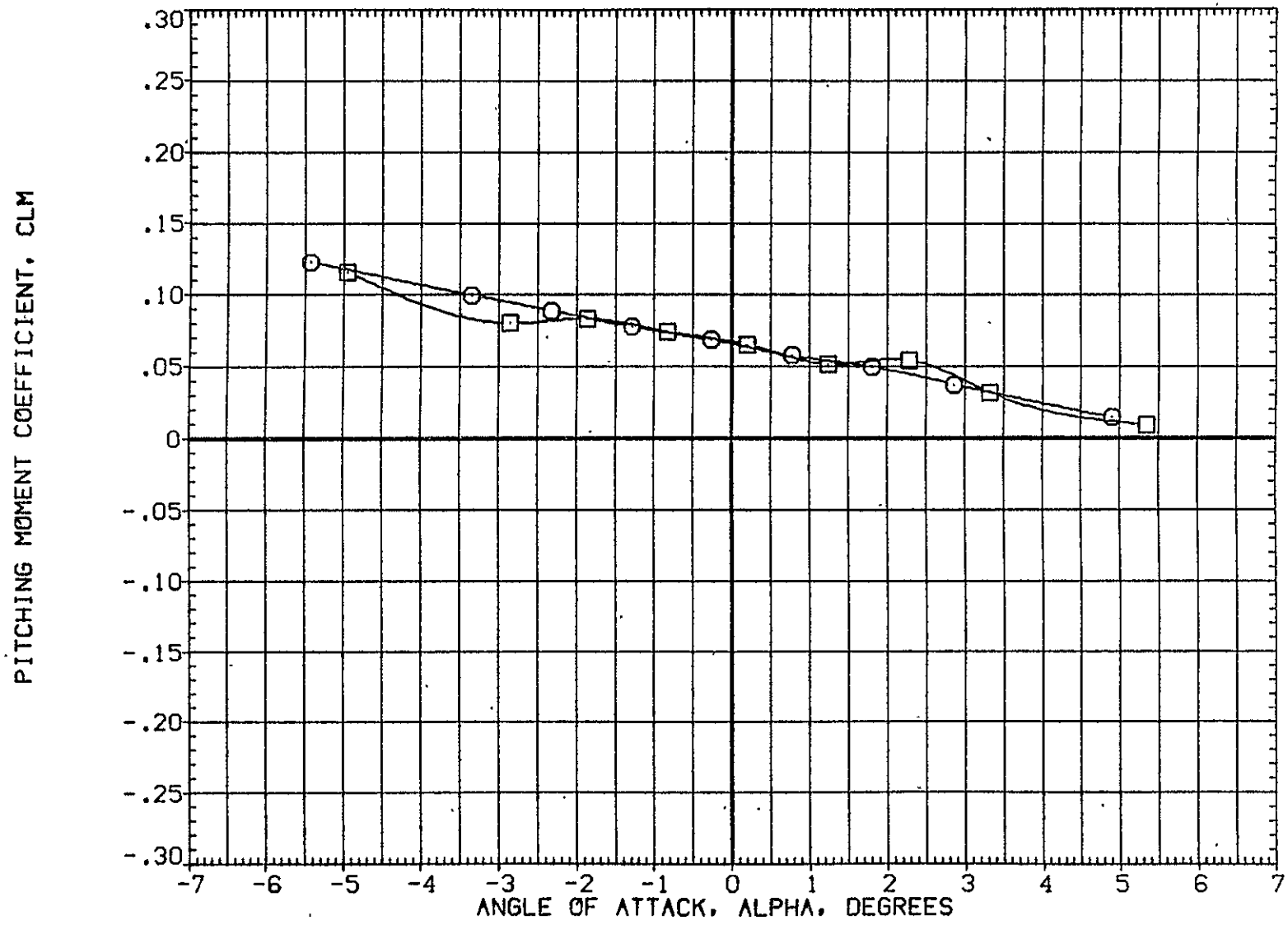


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



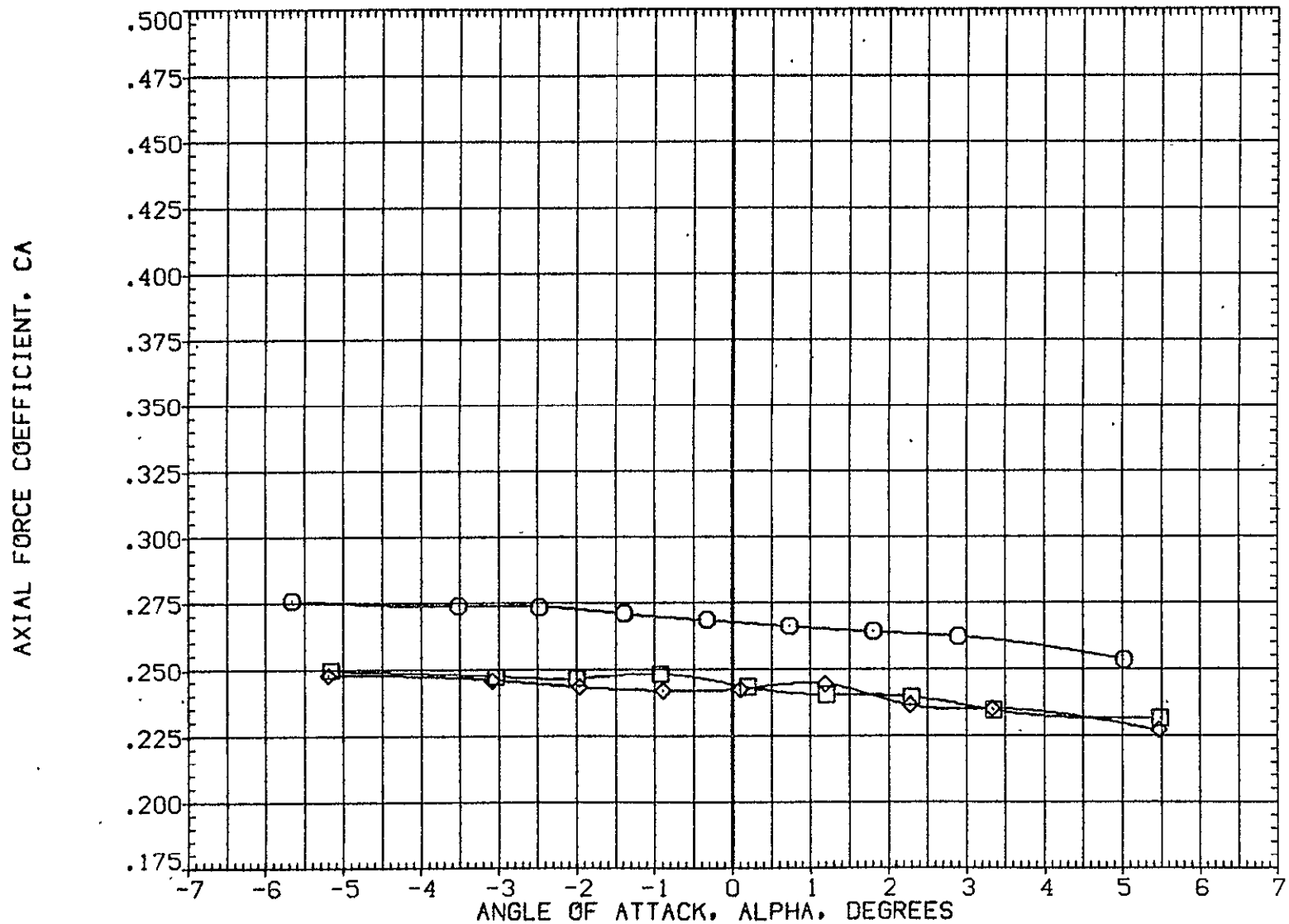
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL028)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(AIL029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AIL030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

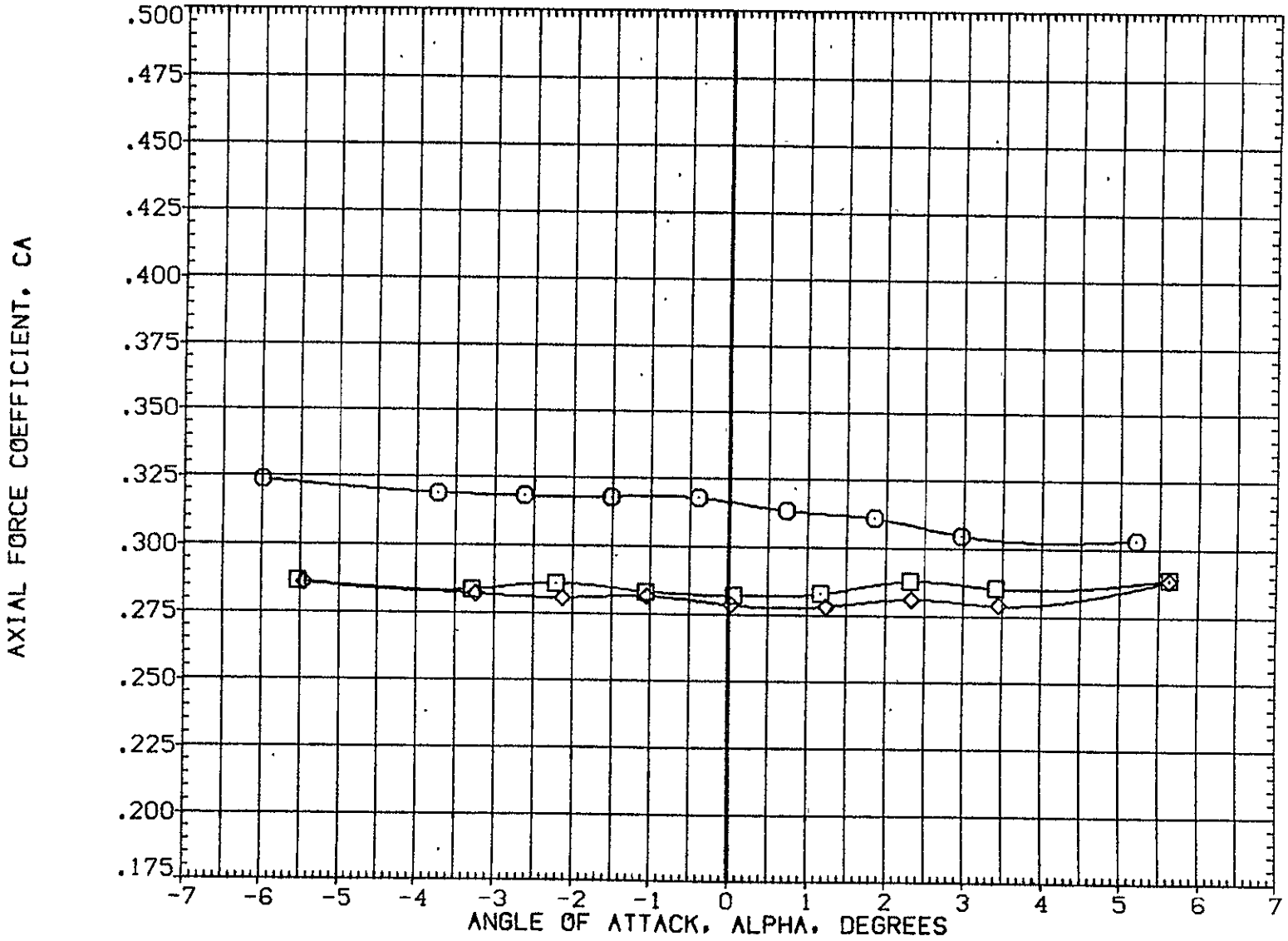


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL028)	○	MSFC TWT 600 (FA14)	01TIS1A1R1K1PS14	.000	.000	90.000	.140
(AIL029)	□	MSFC TWT 600 (FA14)	02TIS1A1R1K1	.000	.000	90.000	.140
(AIL030)	◇	MSFC TWT 600 (FA14)	02TIS1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



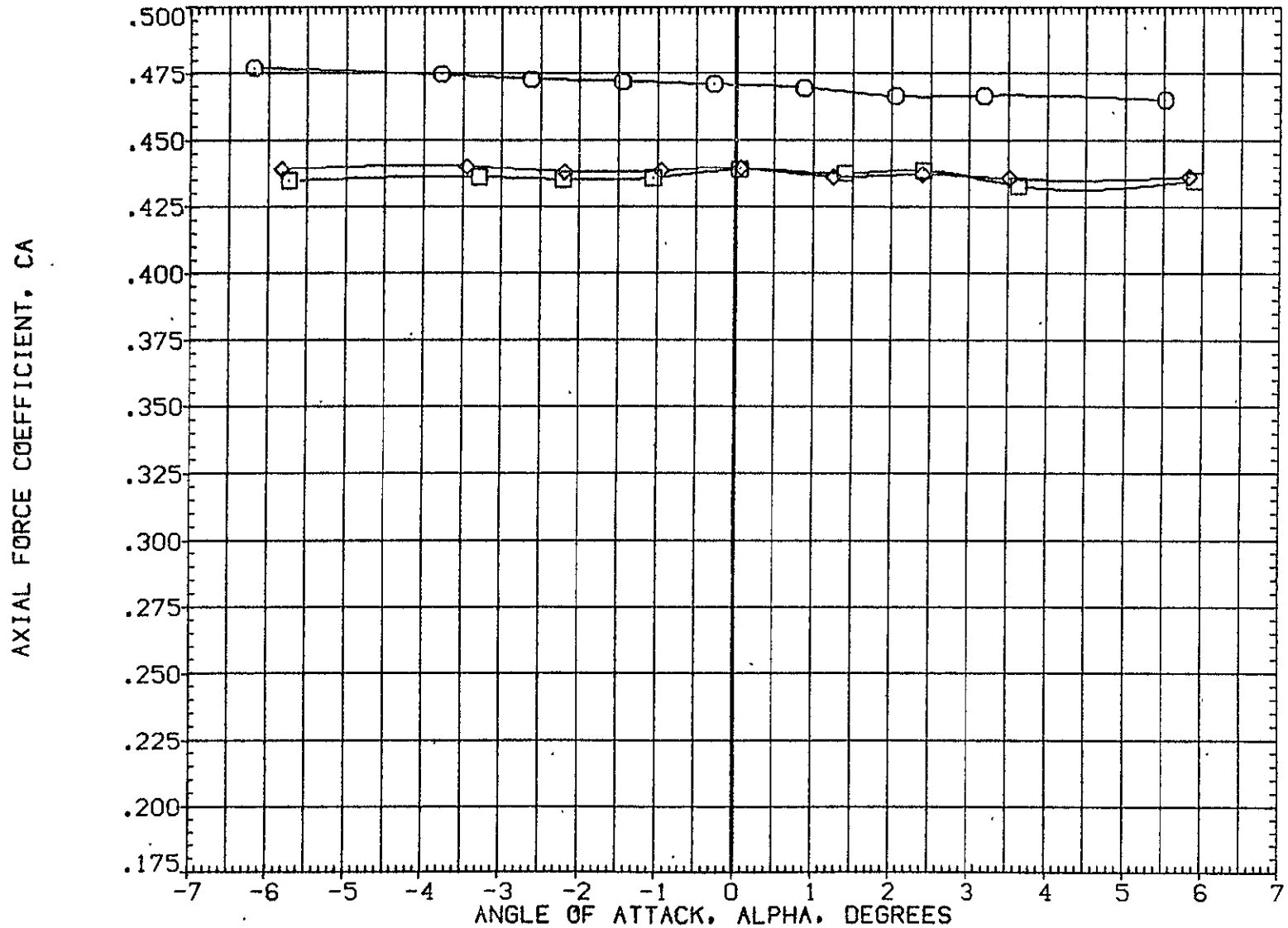
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

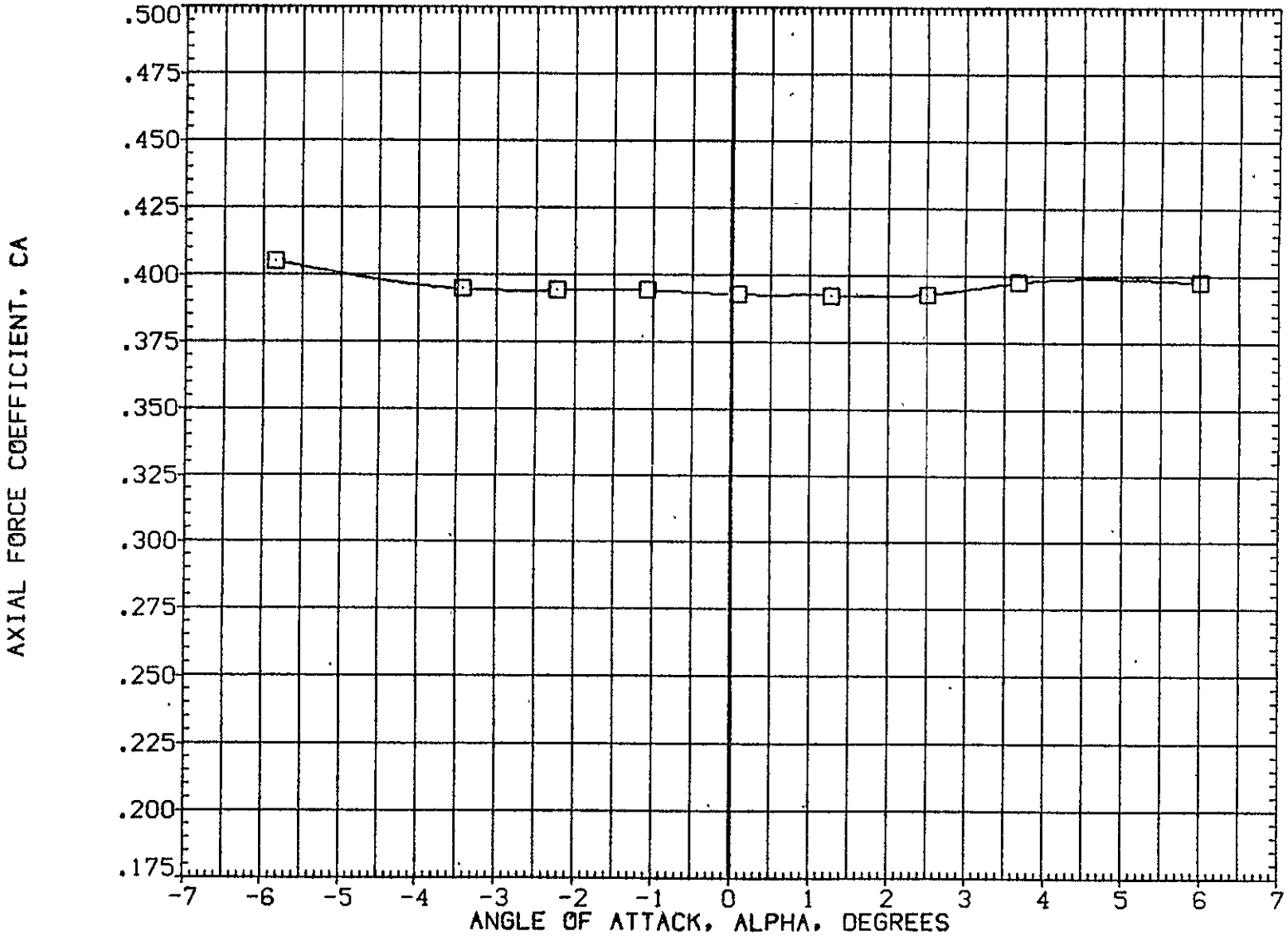


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

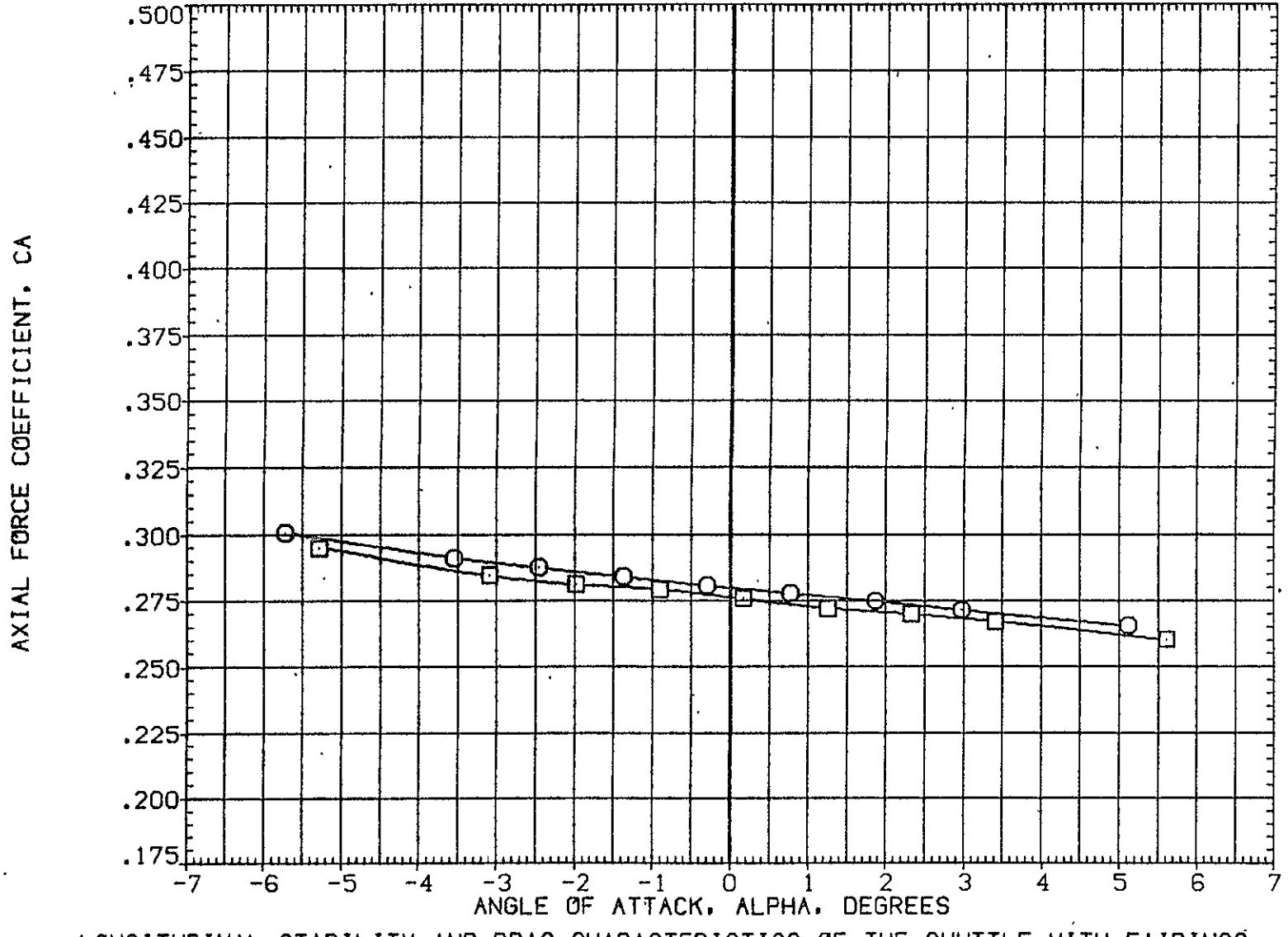


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)		MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)		DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

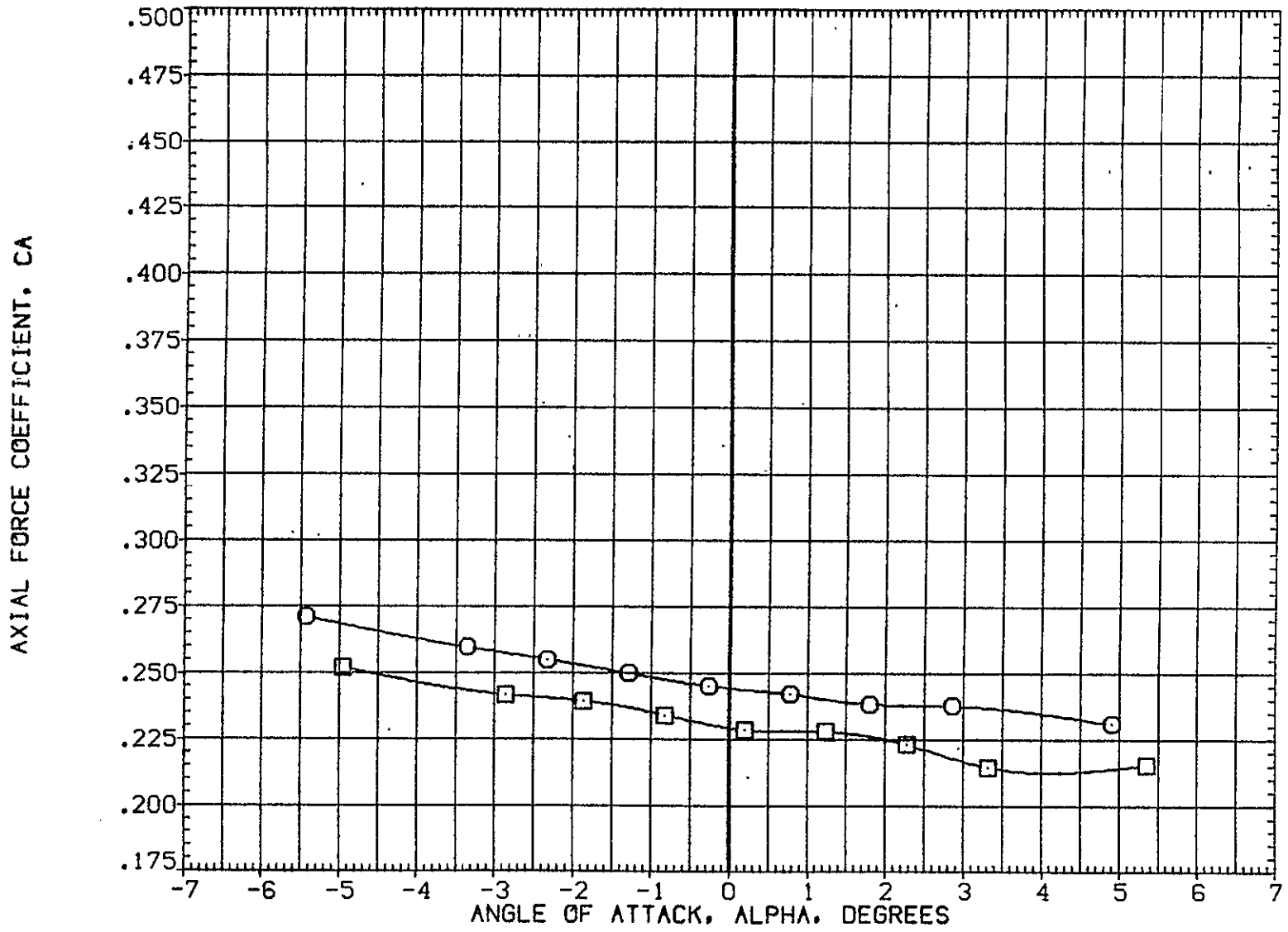


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO28)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(AILO29)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AILO30)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

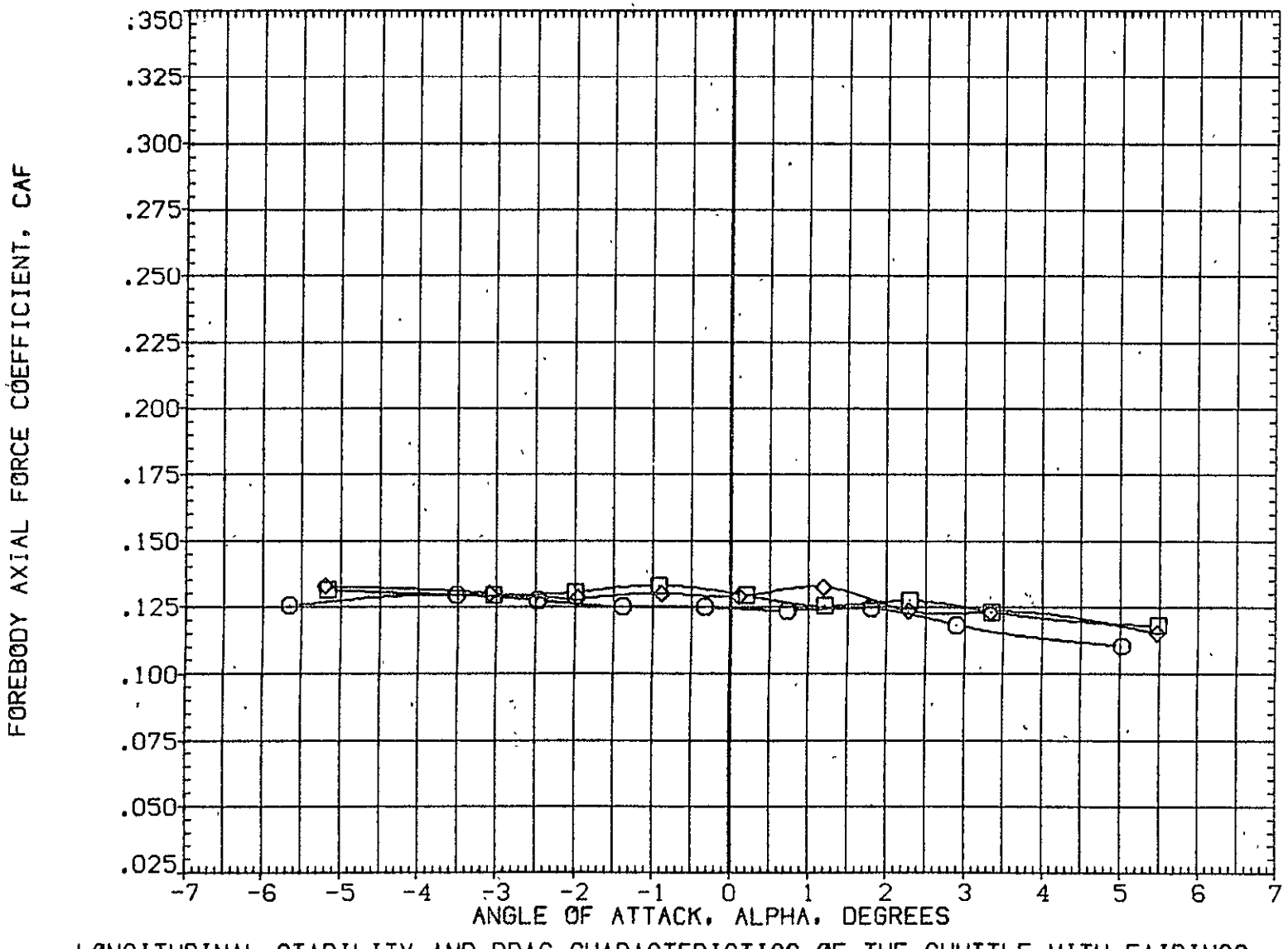


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)		MSFC TWT 600 (FA14)	01TIS1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)		MSFC TWT 600 (FA14)	02TIS1A1R1K1	.000	.000	90.000	.140
(A1L030)		MSFC TWT 600 (FA14)	02TIS1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

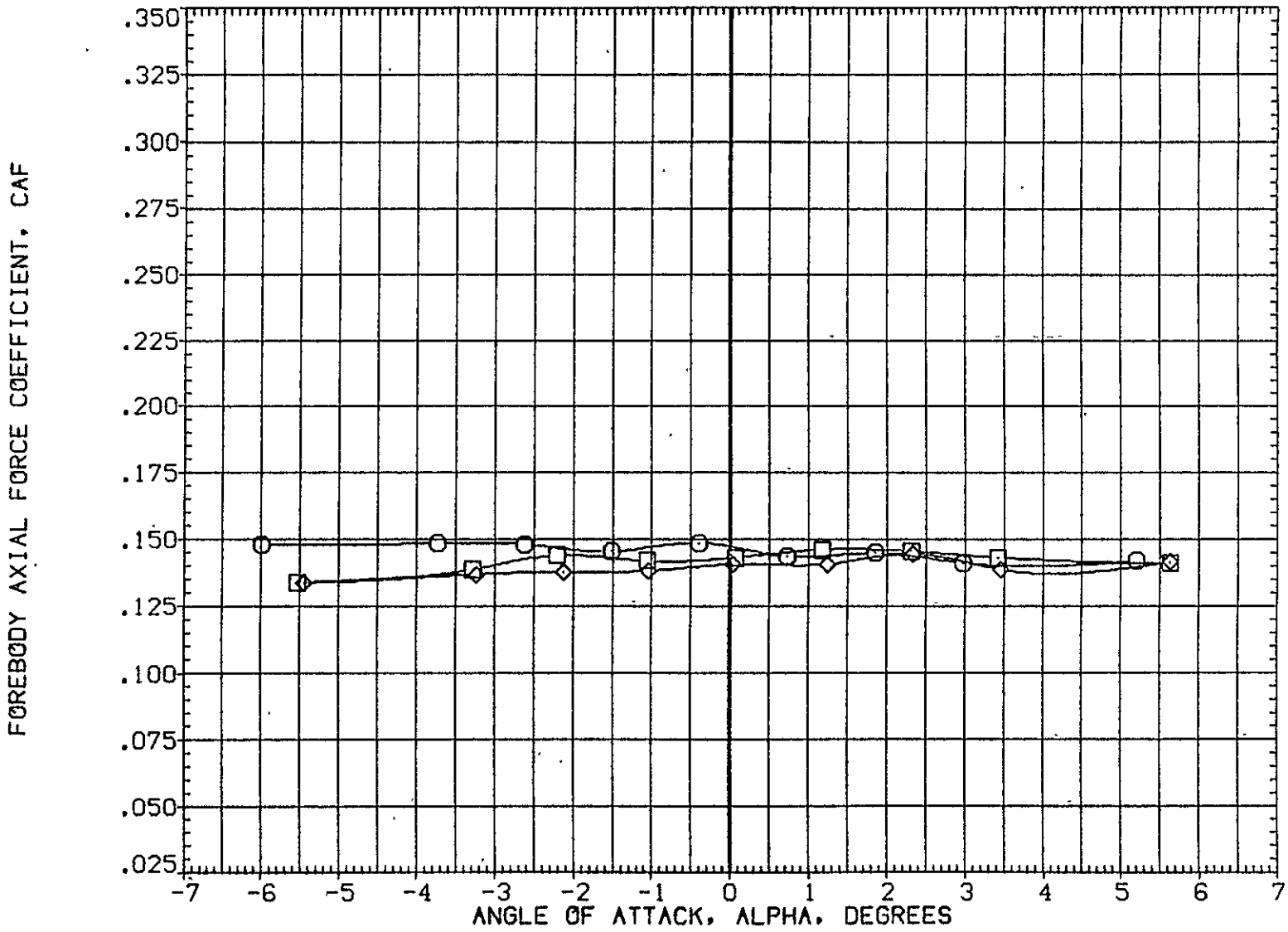


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L028)		MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)		MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

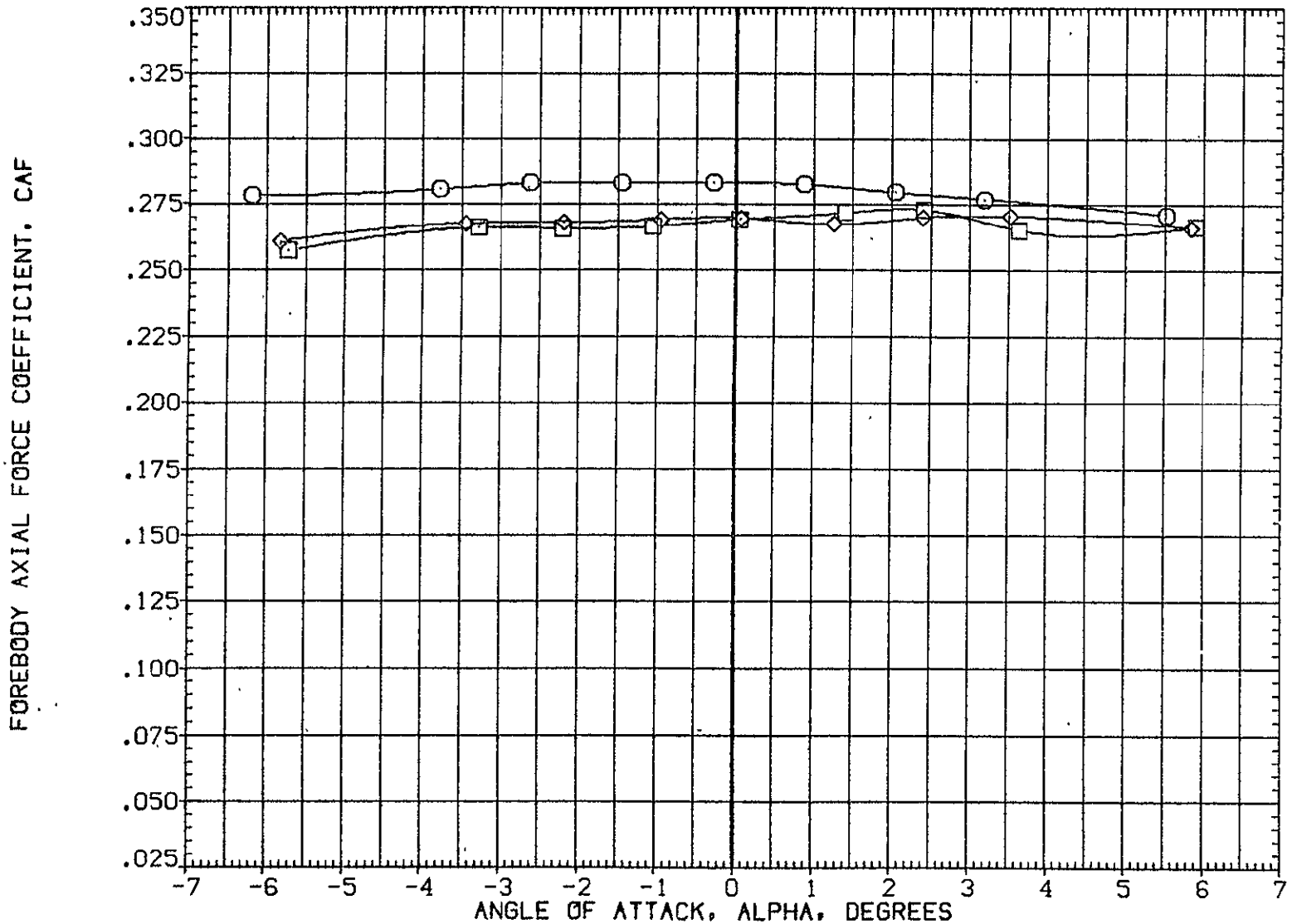


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO28)	○	MSFC TWT 600 (FA14)	01TISIAIRIK1PS14	.000	.000	90.000	.140
(AILO29)	□	MSFC TWT 600 (FA14)	02TISIAIRIK1	.000	.000	90.000	.140
(AILO30)	◇	MSFC TWT 600 (FA14)	02TISIAIRIK1F19	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

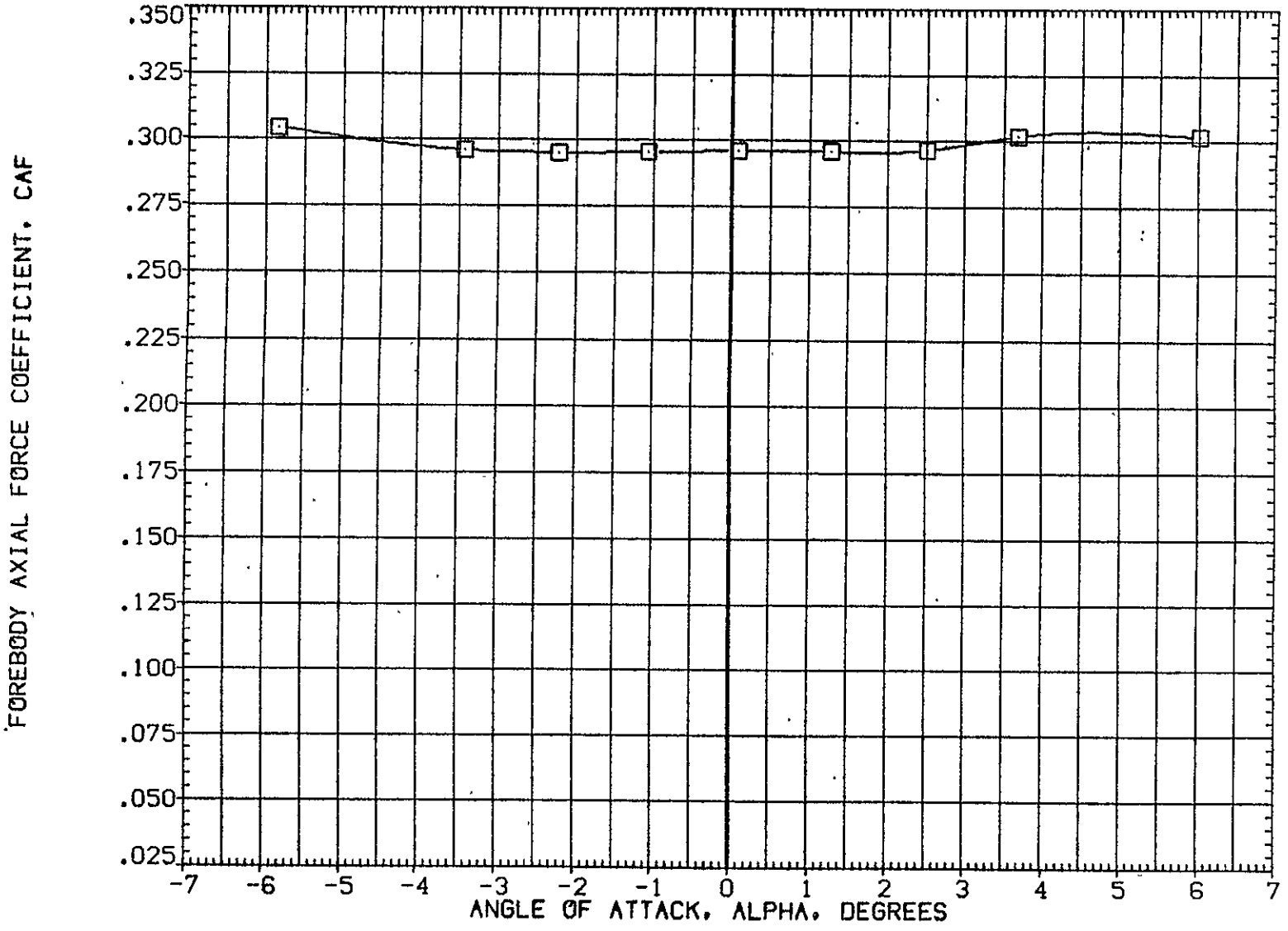


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO28)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO29)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AILO30)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

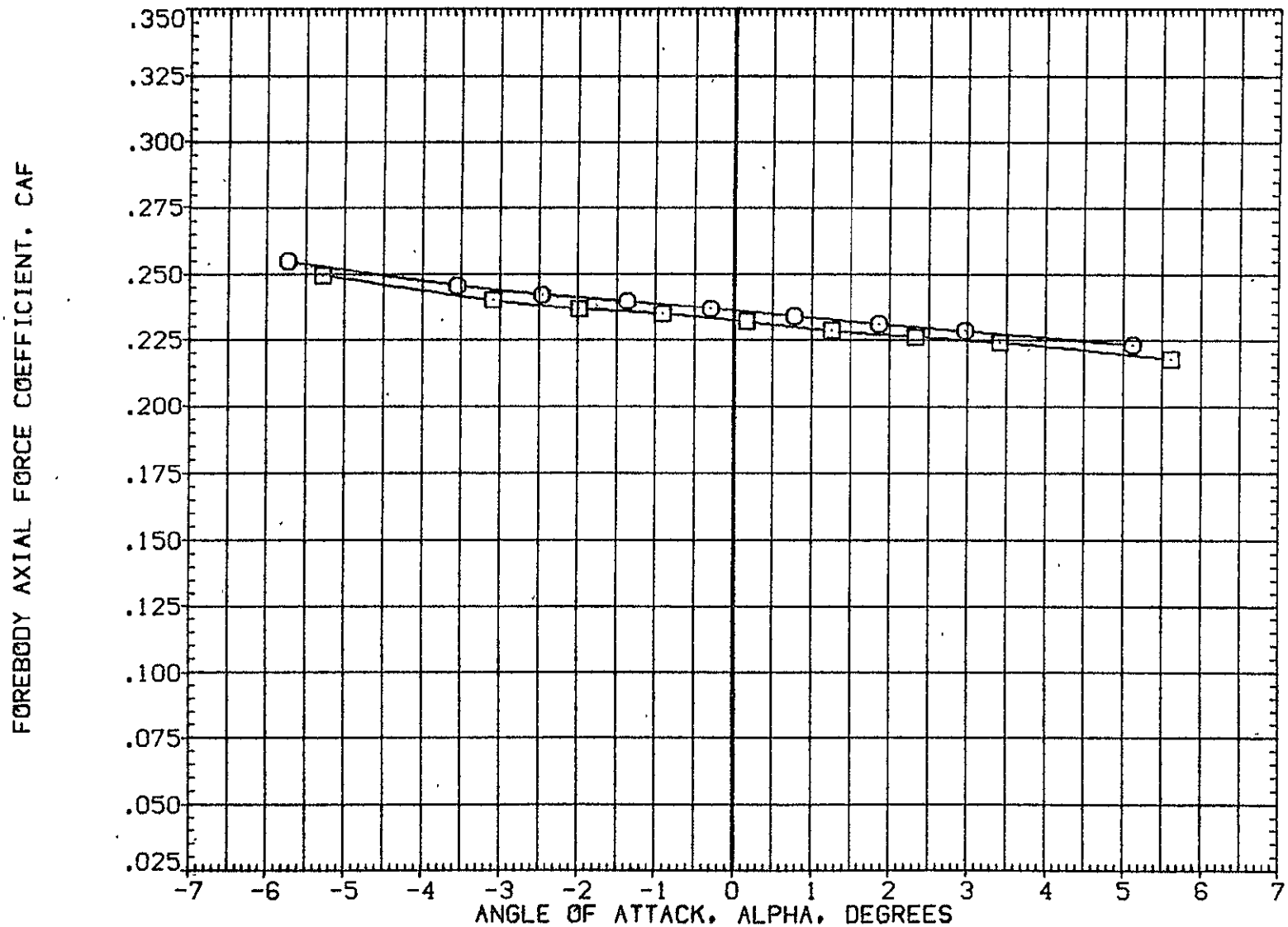


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL028)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140
(AIL029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AIL030)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

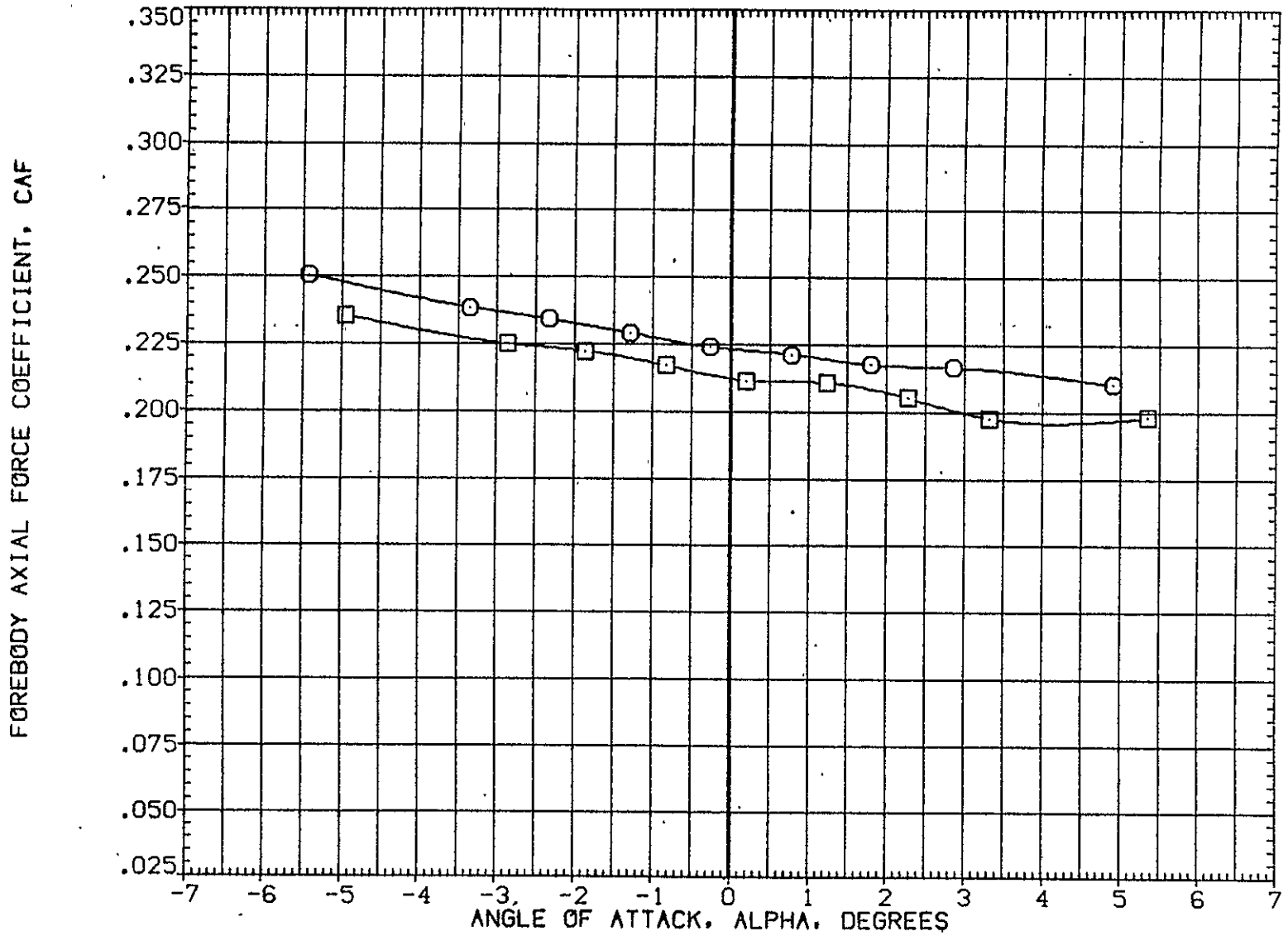


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL028)	○	MSFC TWT 600 (FA14)	01TISIAIRIKIPS14	.000	.000	90.000	.140
(AIL029)	□	MSFC TWT 600 (FA14)	02TISIAIRIKI	.000	.000	90.000	.140
(AIL030)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

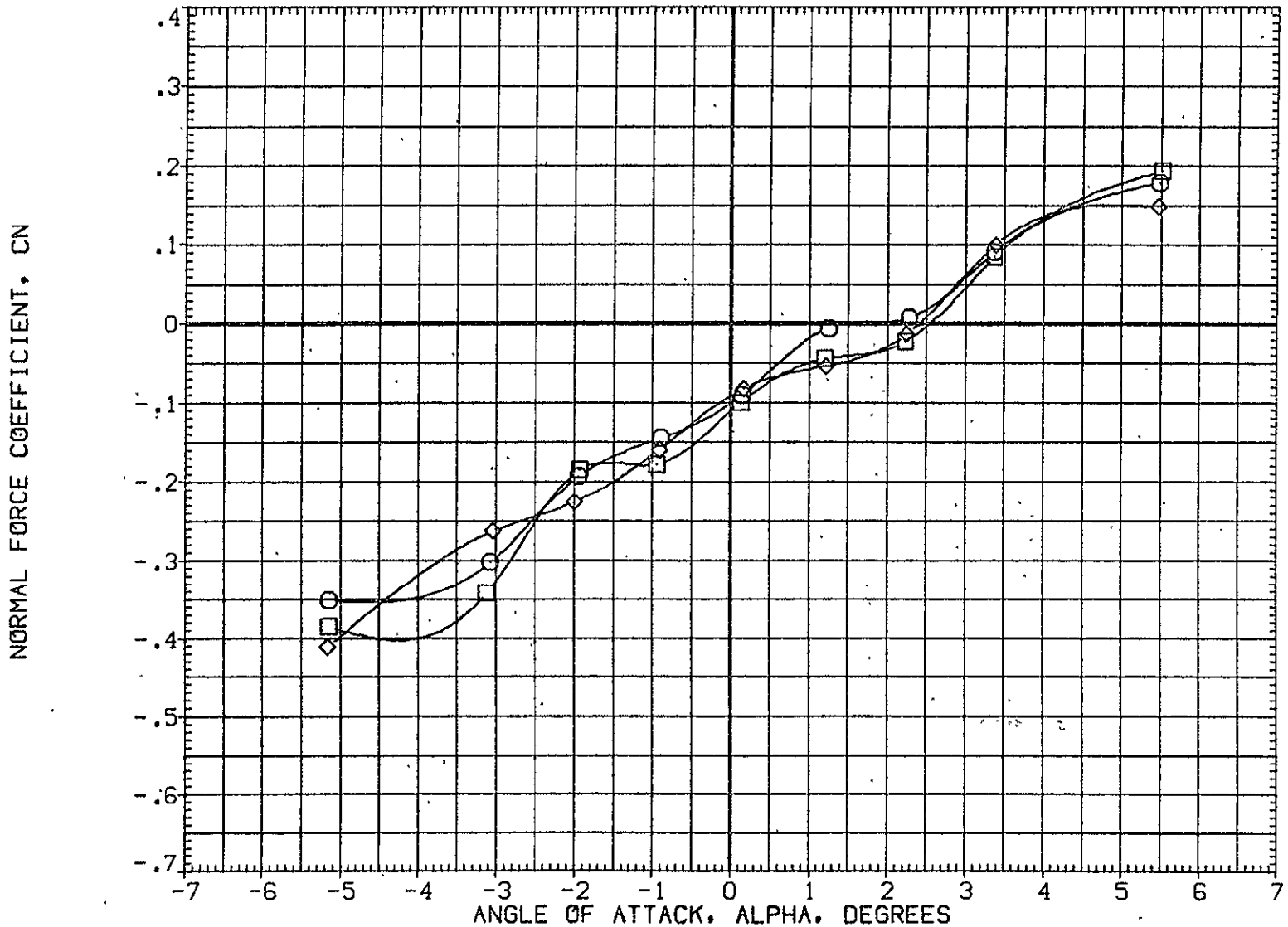


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L031)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

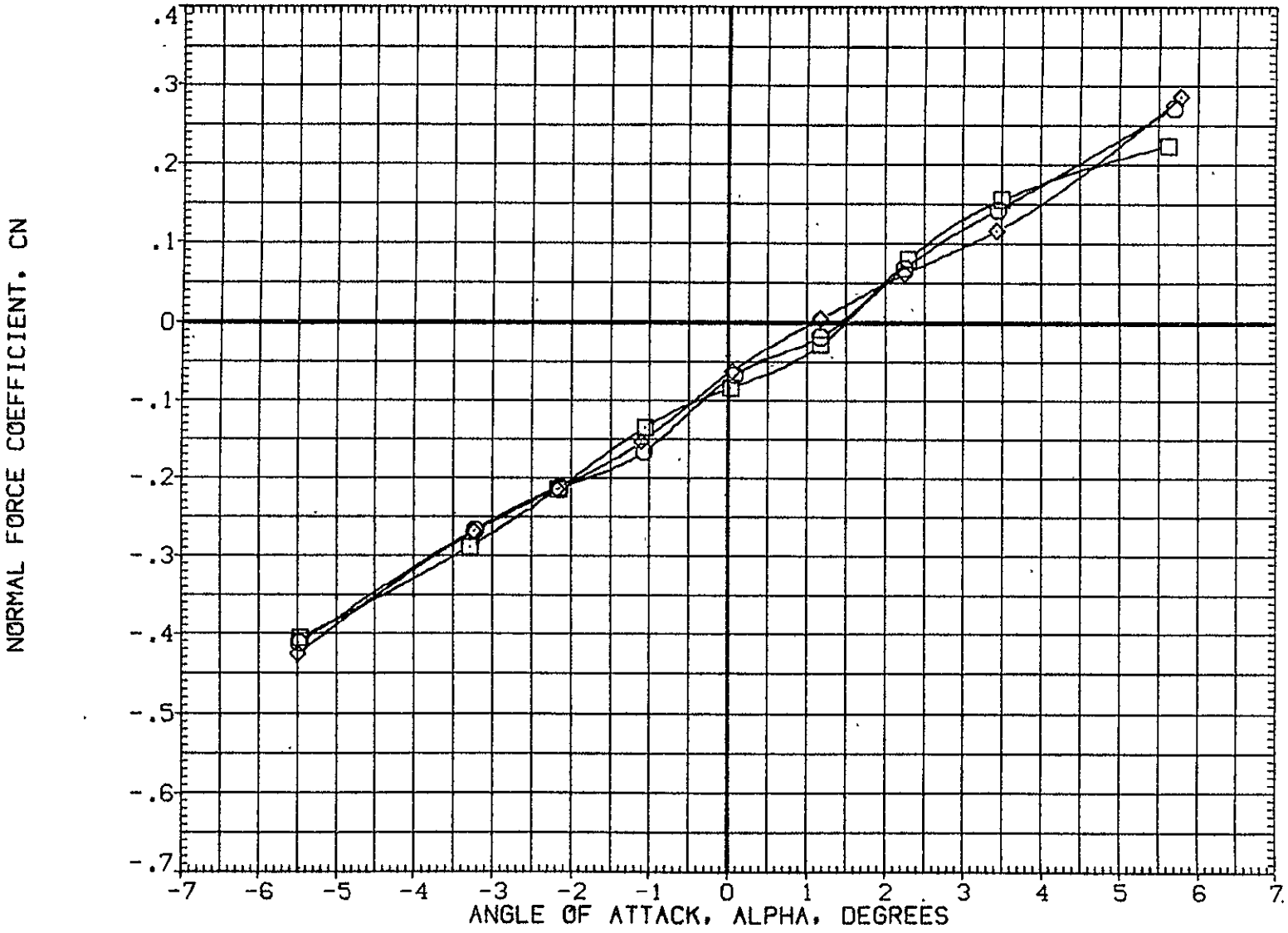


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILØ31)	□	MSFC TWT 600 (FA14)	Ø2TISIAIRIKIF20	.000	.000	90.000	.140
(AILØ32)	◁□	MSFC TWT 600 (FA14)	Ø2TISIAIRIKIF21	.000	.000	90.000	.140
(AILØ33)	◇	MSFC TWT 600 (FA14)	Ø2TISIAIRIKIF22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

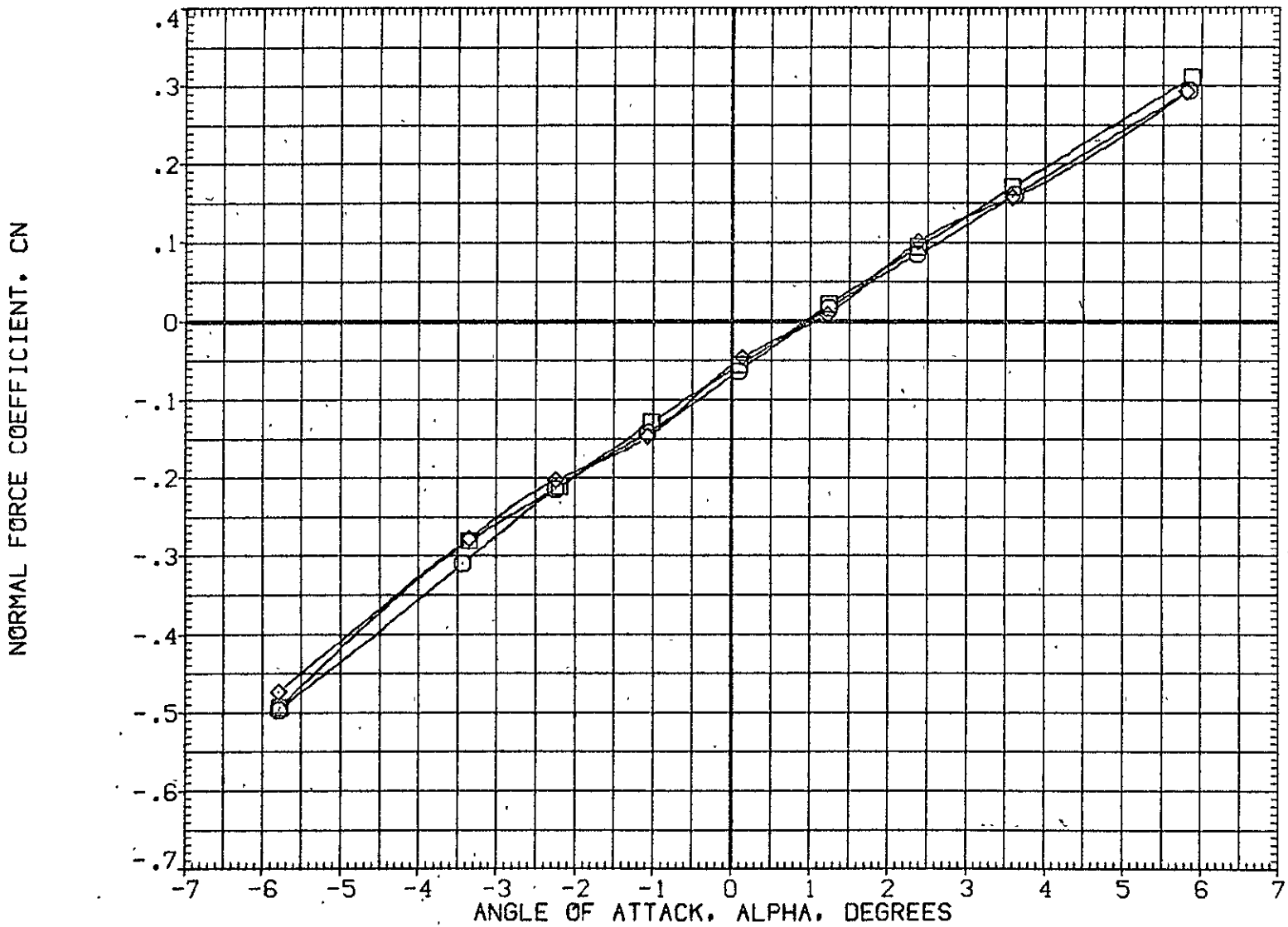


LØNGITUDINAL STABILITY AND DRAG CHARACTERISTICS ØF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO31)	○	MSFC TWT 600 (FA14)	02TISIAIRIKIF20	.000	.000	90.000	.140
(AILO32)	□	MSFC TWT 600 (FA14)	02TISIAIRIKIF21	.000	.000	90.000	.140
(AILO33)	◇	MSFC TWT 600 (FA14)	02TISIAIRIKIF22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

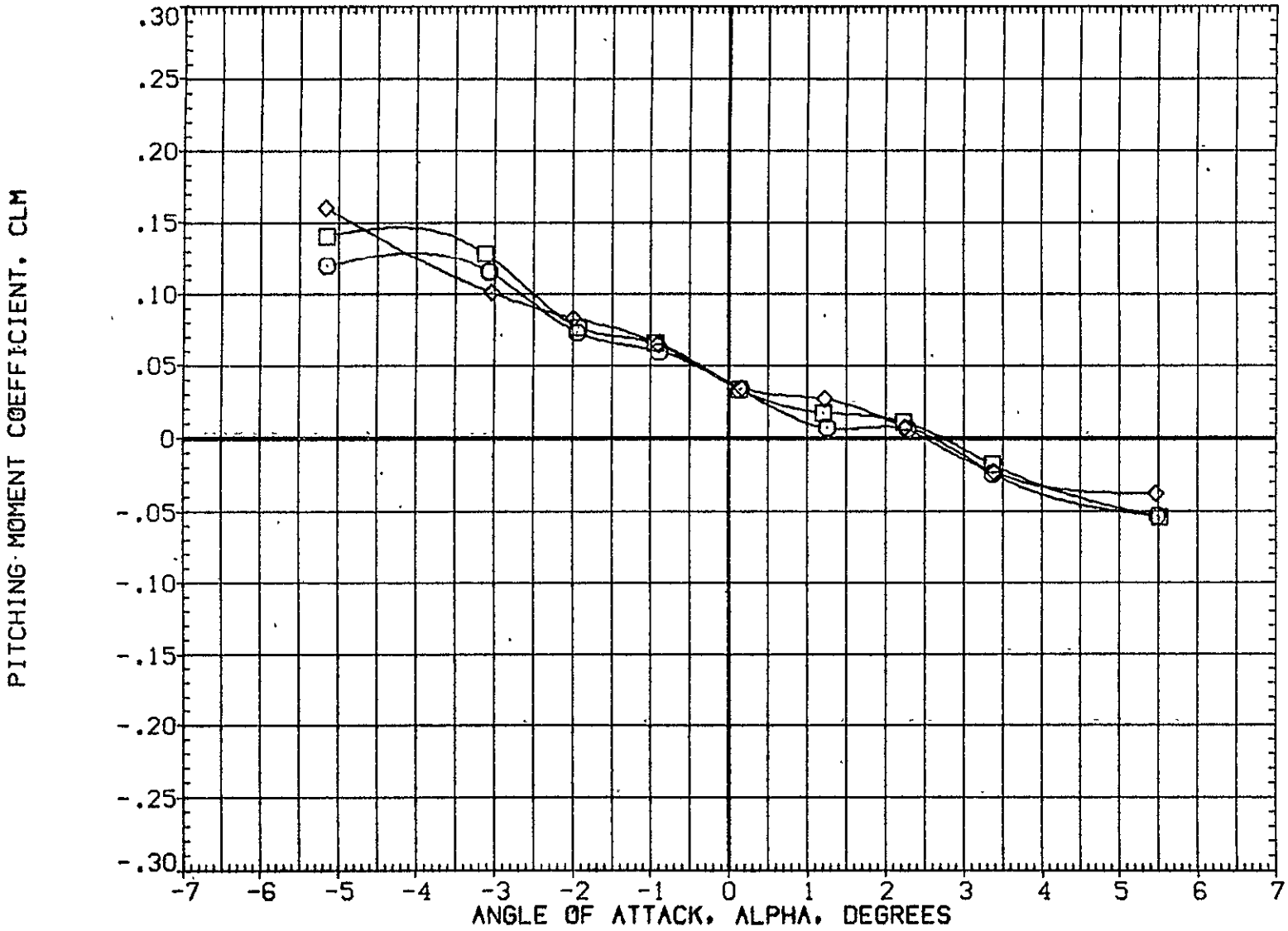


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L031)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

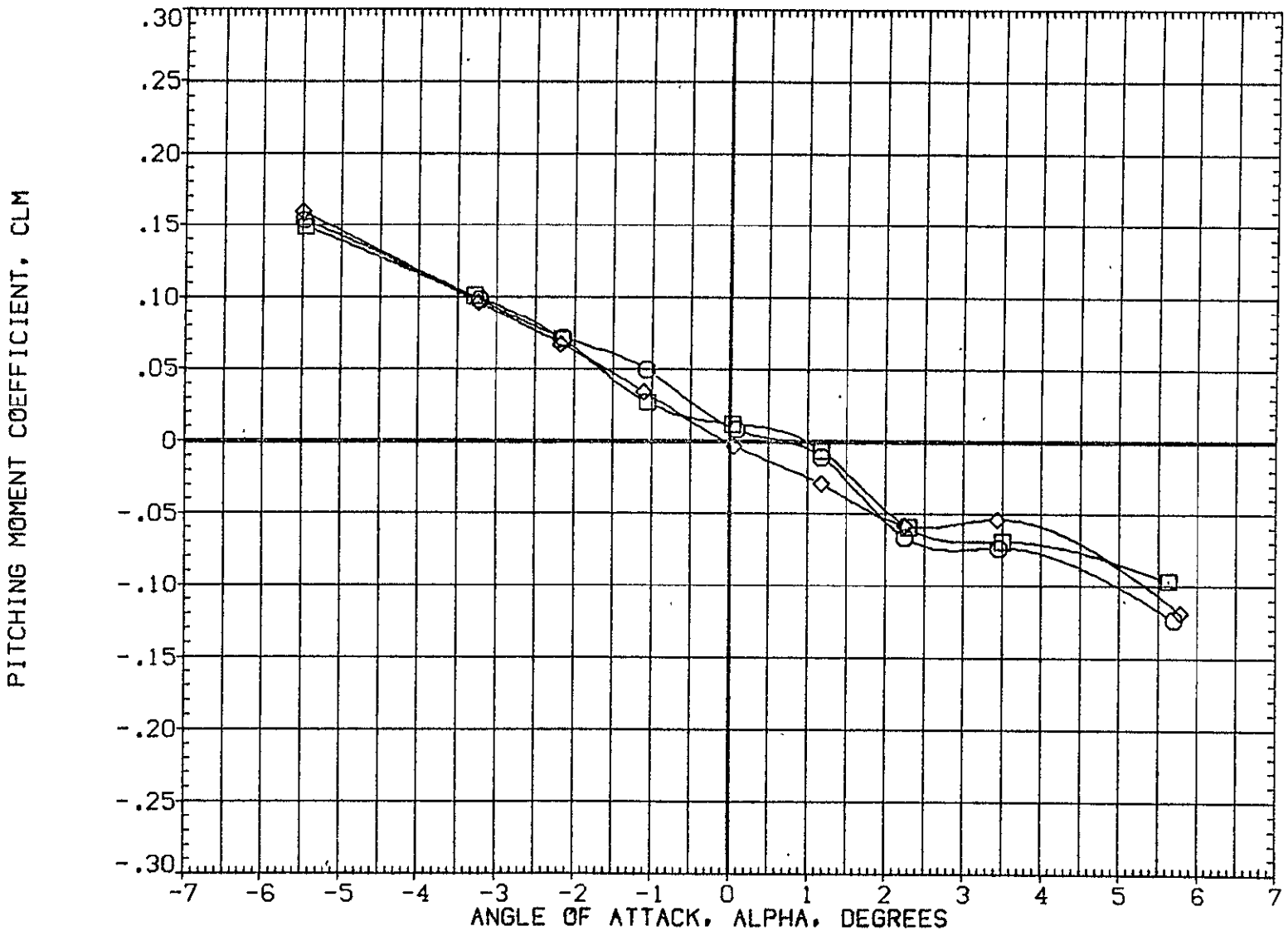


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L031)	▢	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	▢	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

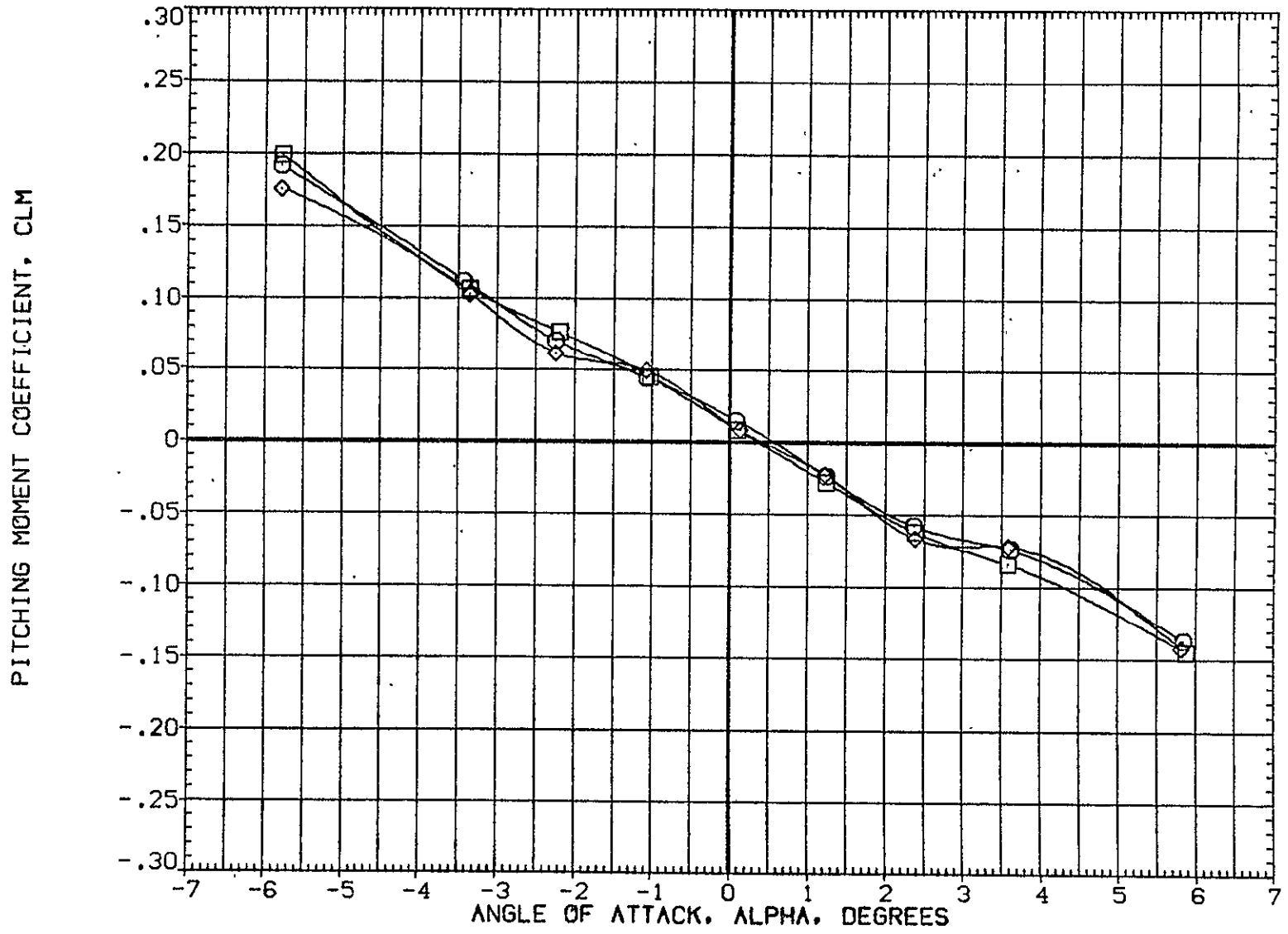


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO31)	○	MSFC TWT 600 (FA14)	02TISIAIRIKIF20	.000	.000	90.000	.140
(AILO32)	□	MSFC TWT 600 (FA14)	02TISIAIRIKIF21	.000	.000	90.000	.140
(AILO33)	◇	MSFC TWT 600 (FA14)	02TISIAIRIKIF22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

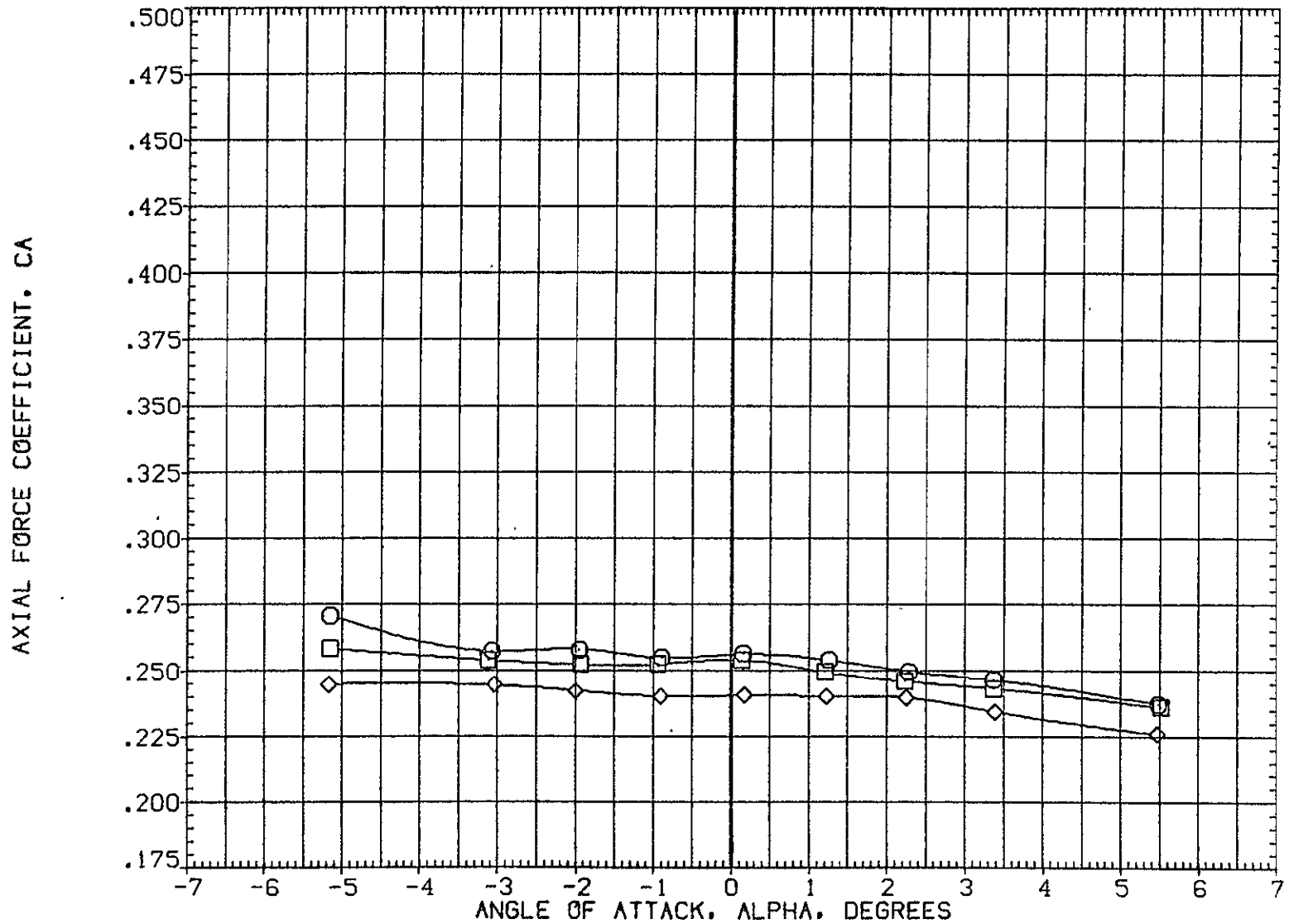


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L031)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

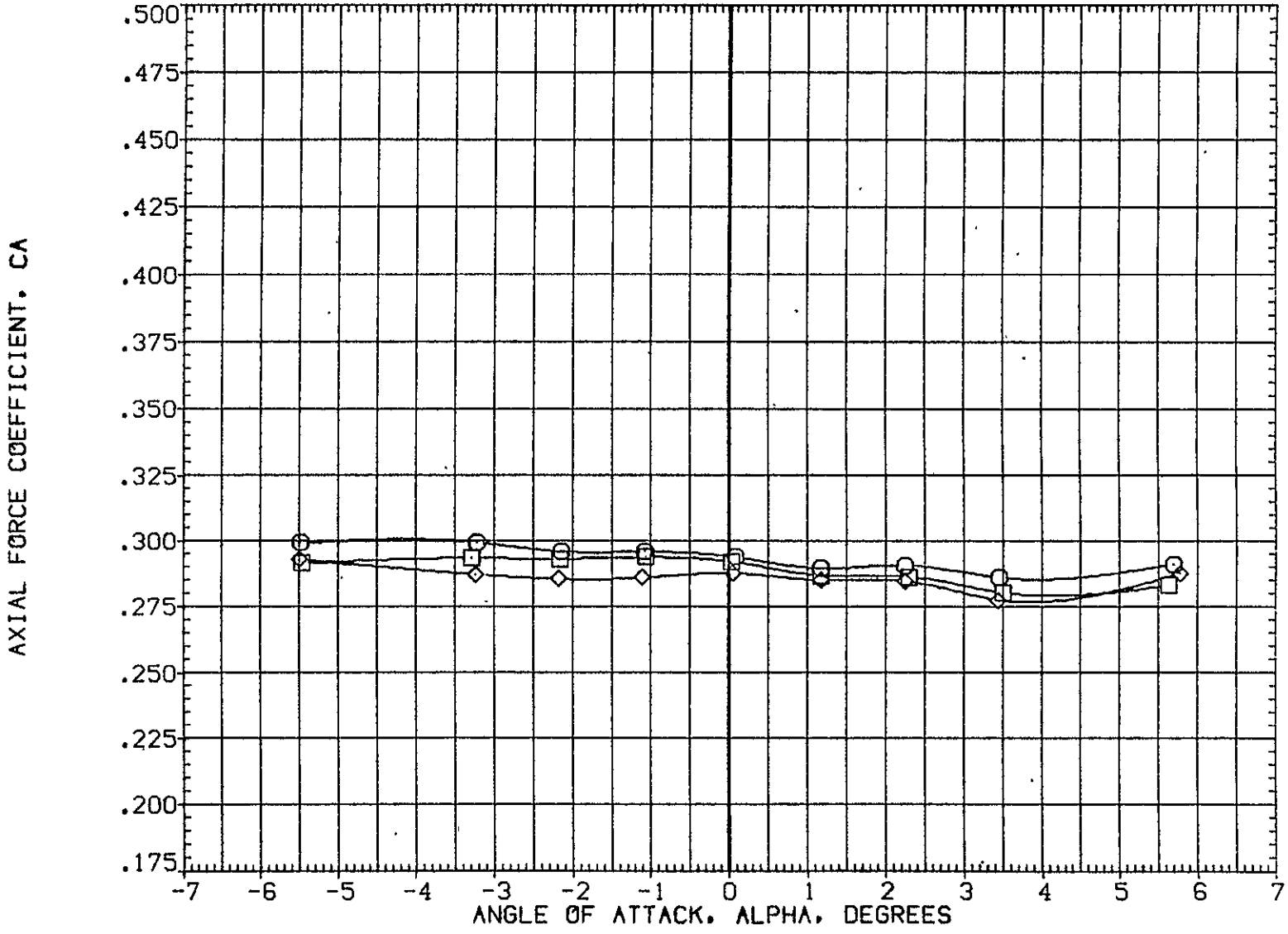


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L031)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	◇	MSFC TWT 600 (FA14)-	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



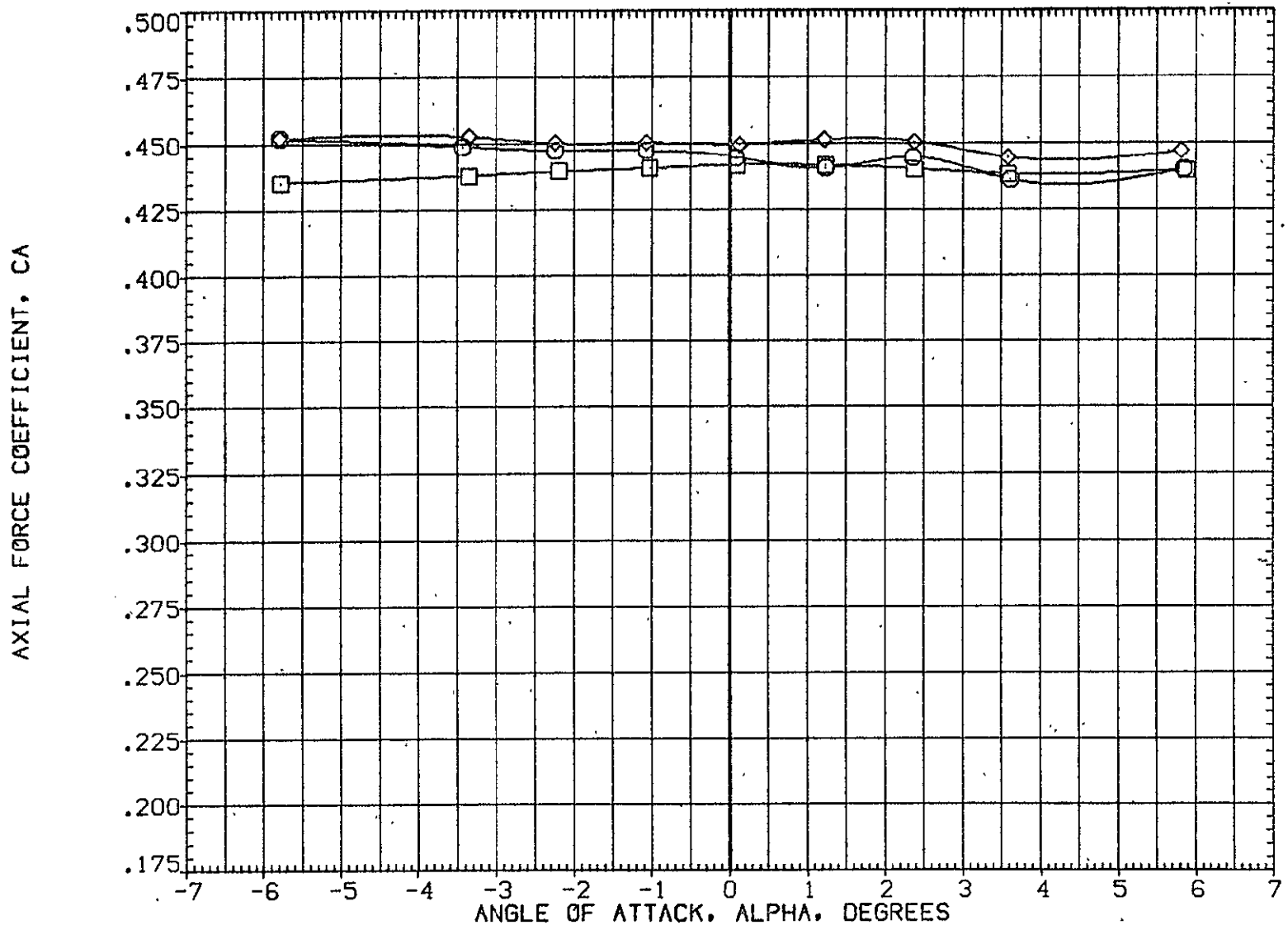
LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO31)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1LO32)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1LO33)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

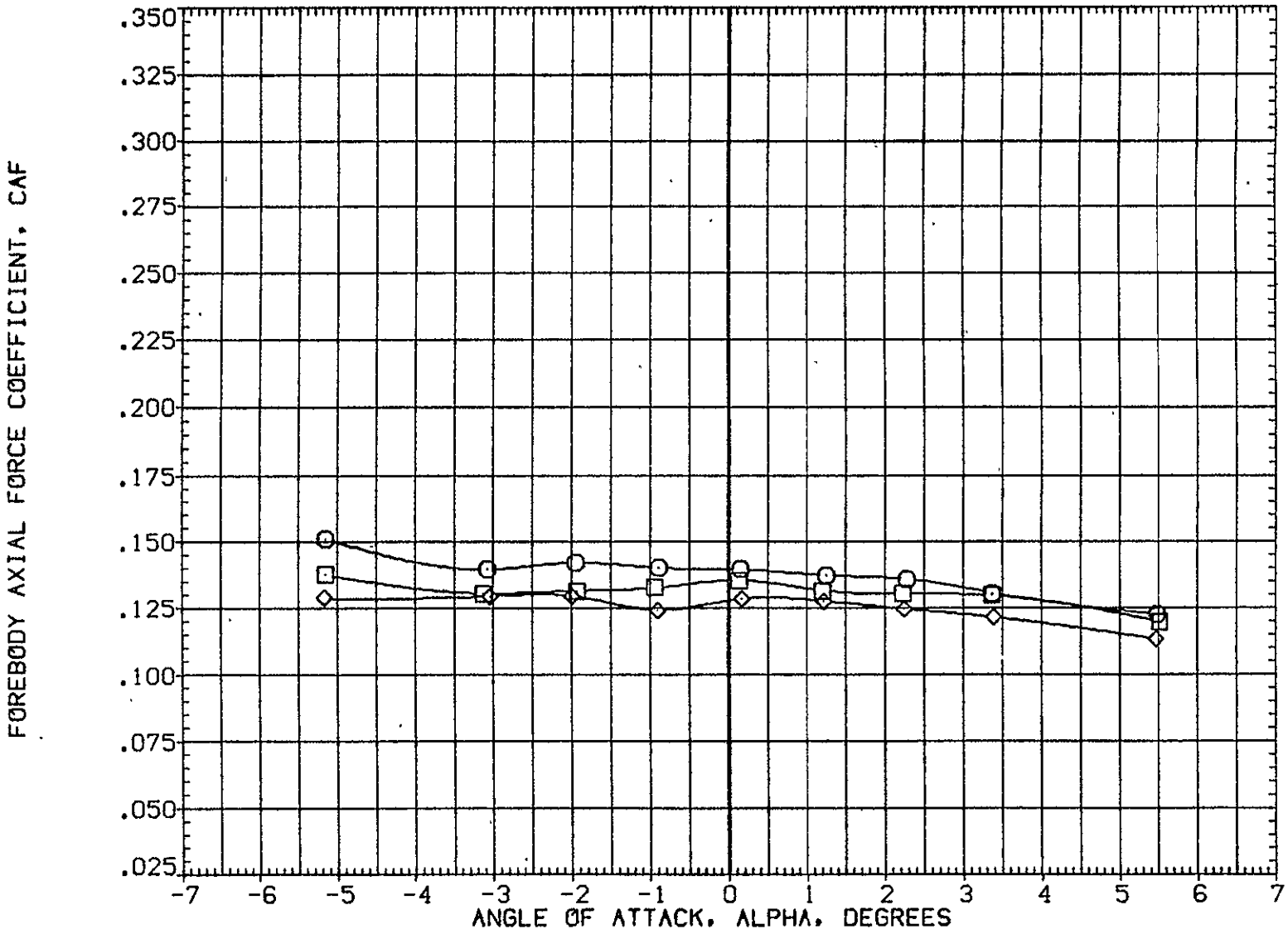


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L031)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	▽	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

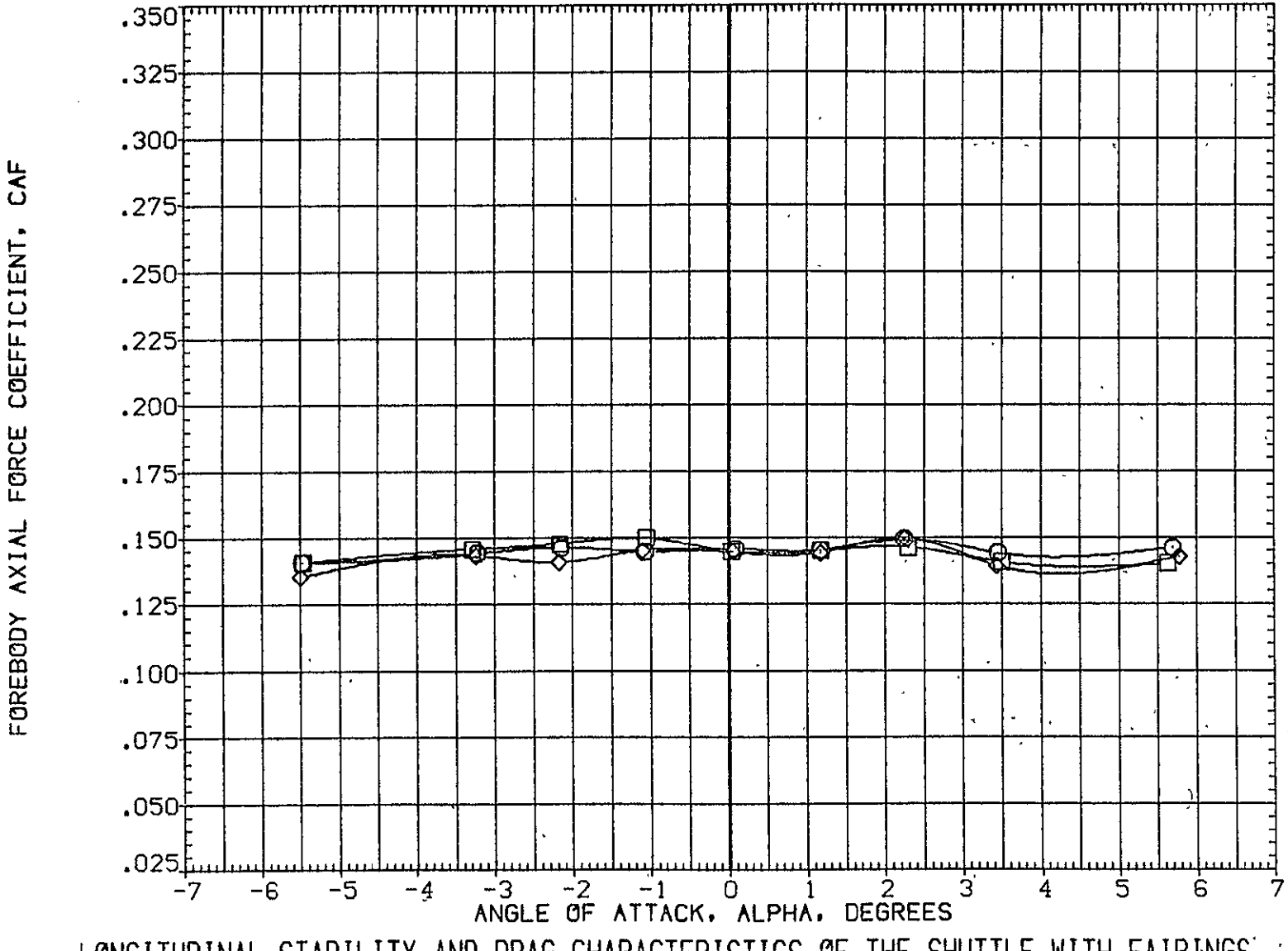


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L031)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

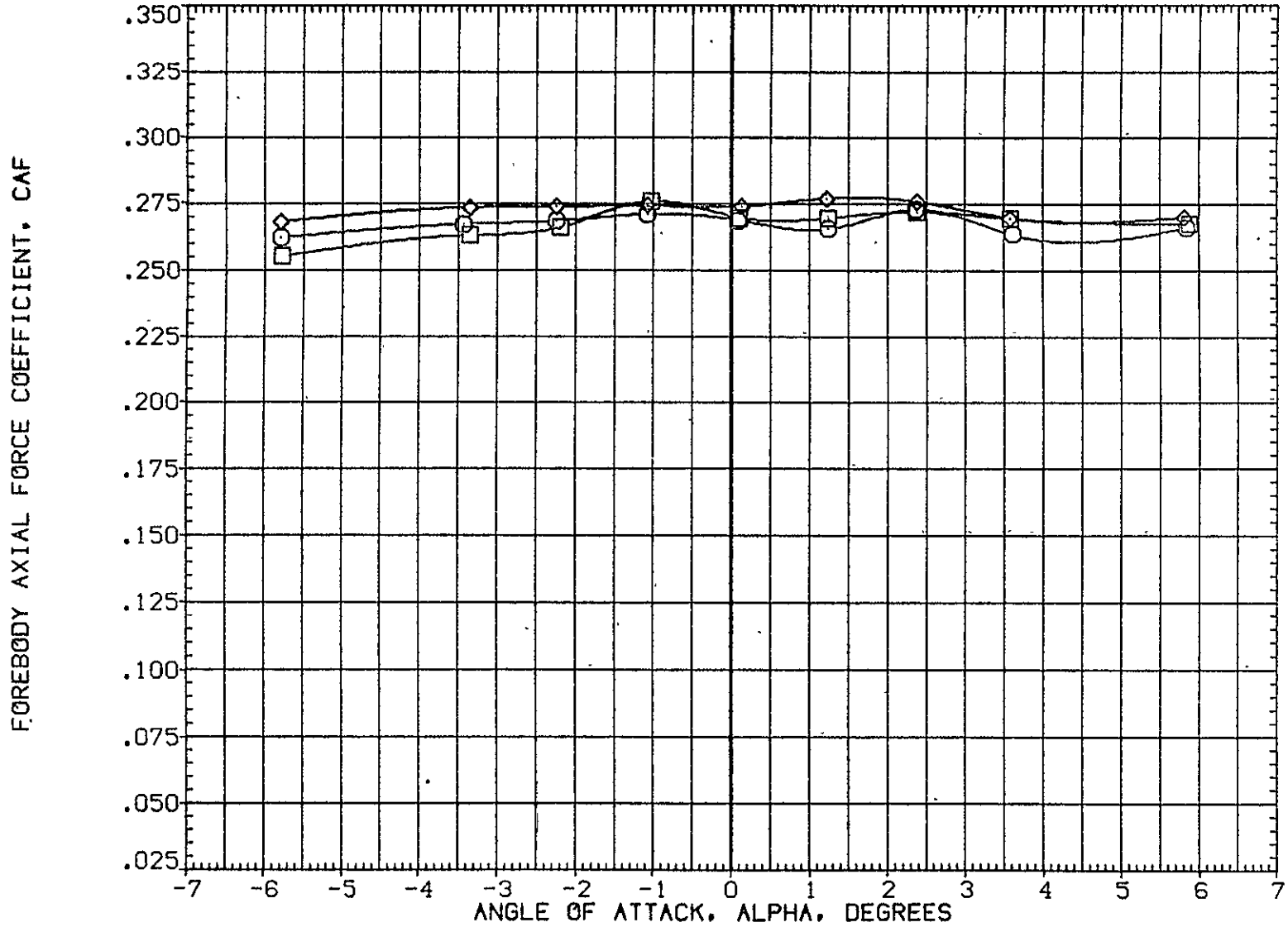


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL031)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(AIL032)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(AIL033)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

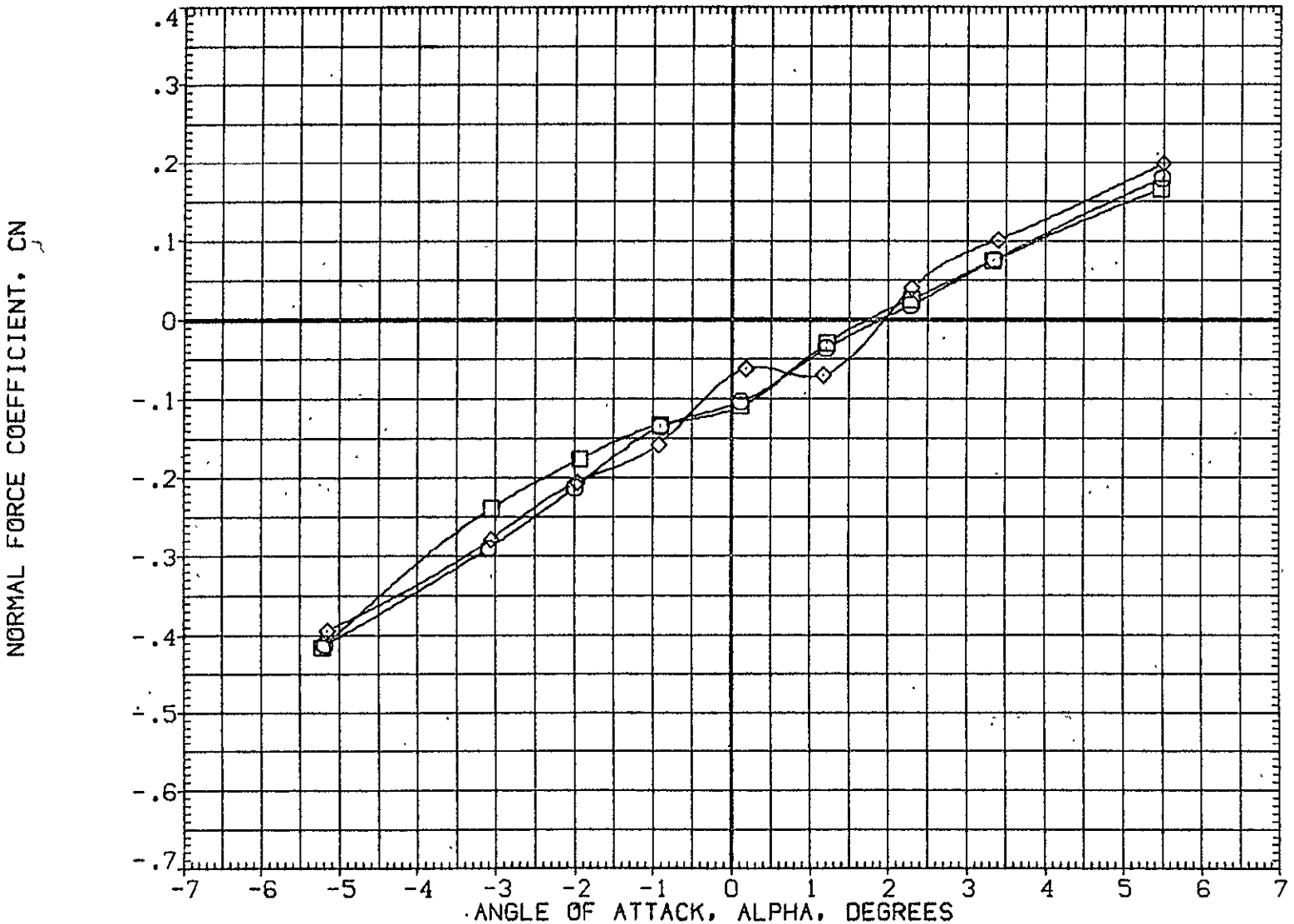


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO34)	◻	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1LO35)	◇	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1LO36)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L034)	□	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	◇	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

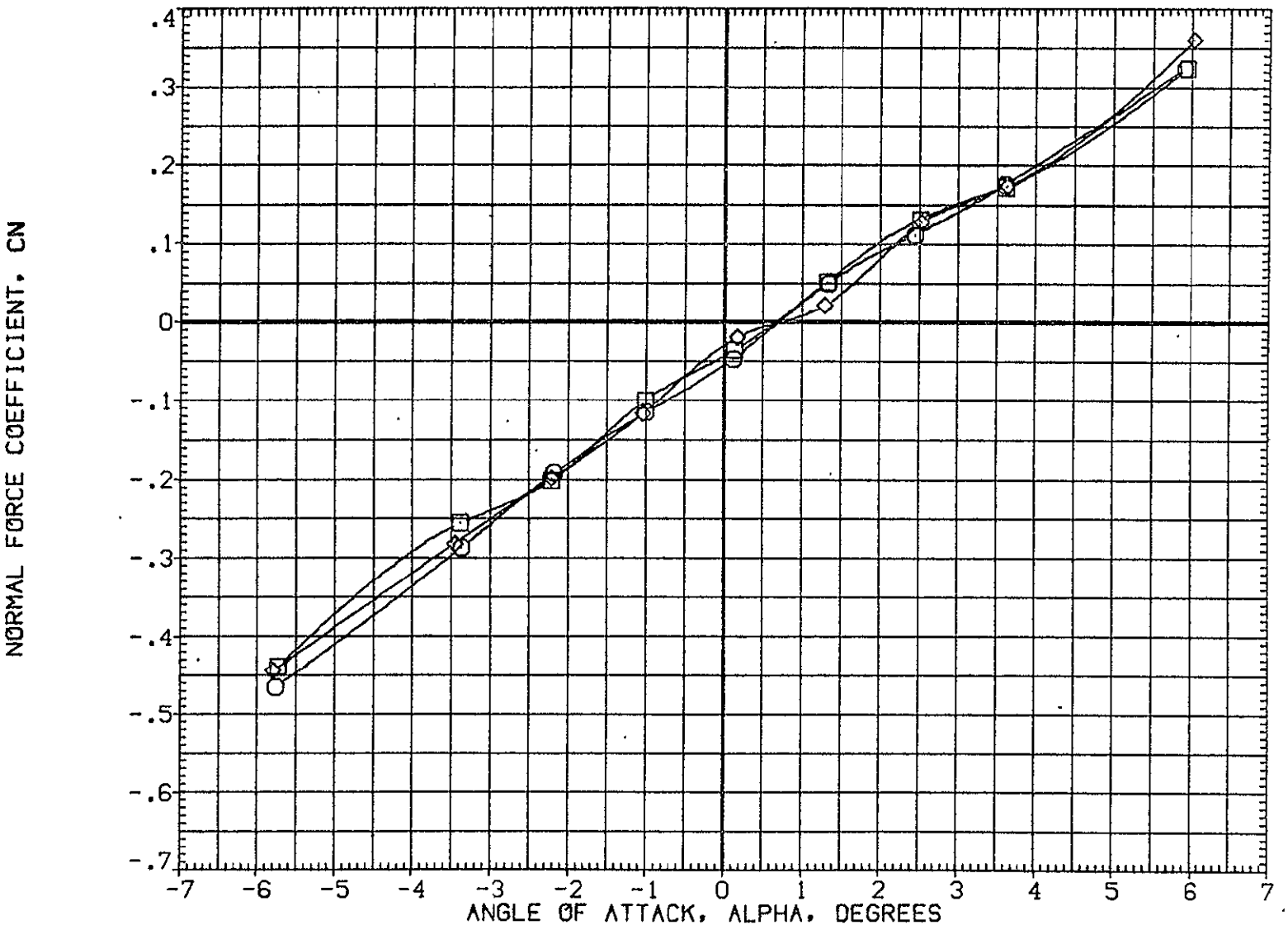


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO34)	▢	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(AILO35)	◁▢	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(AILO36)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

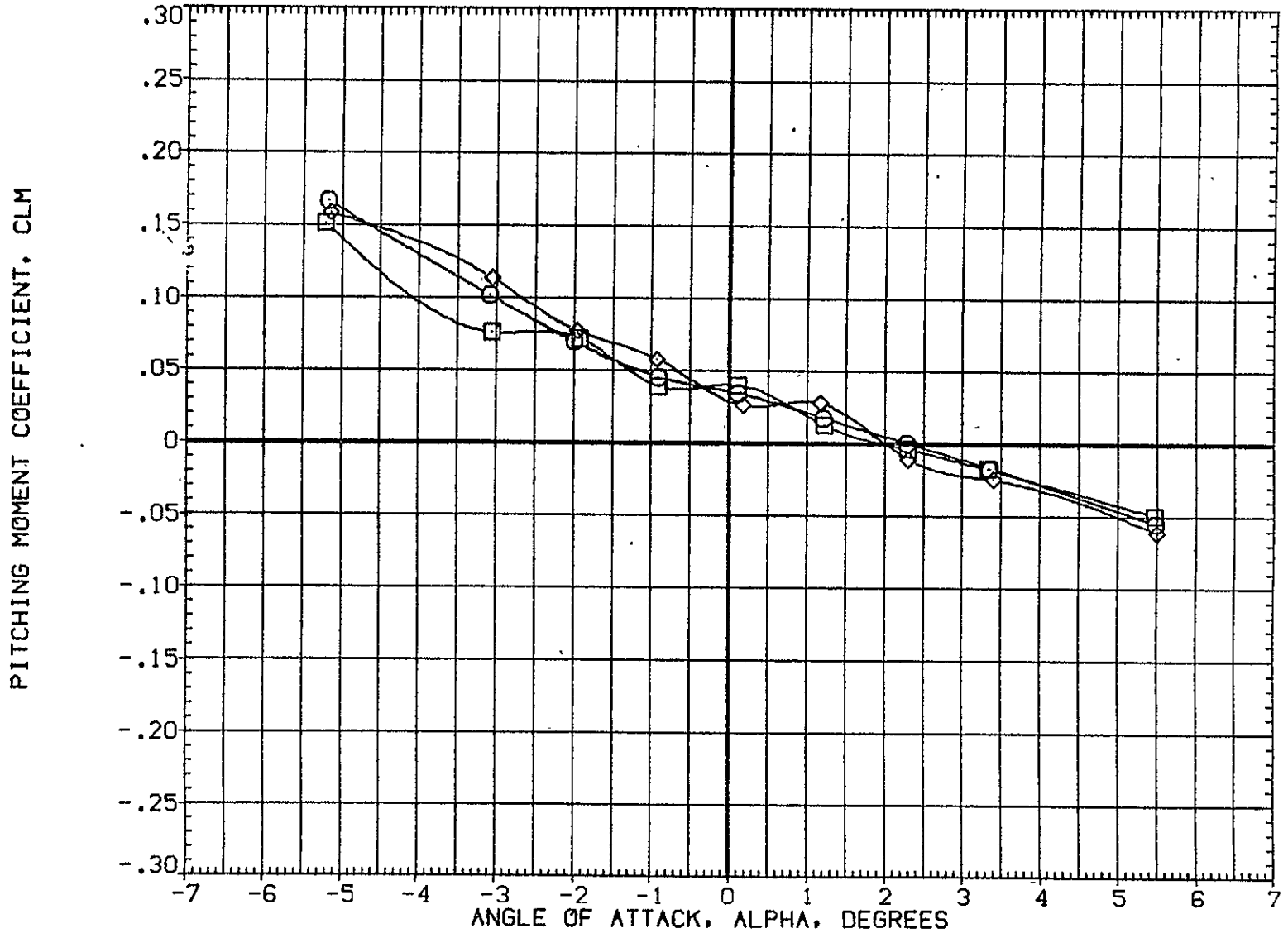


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L034)	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

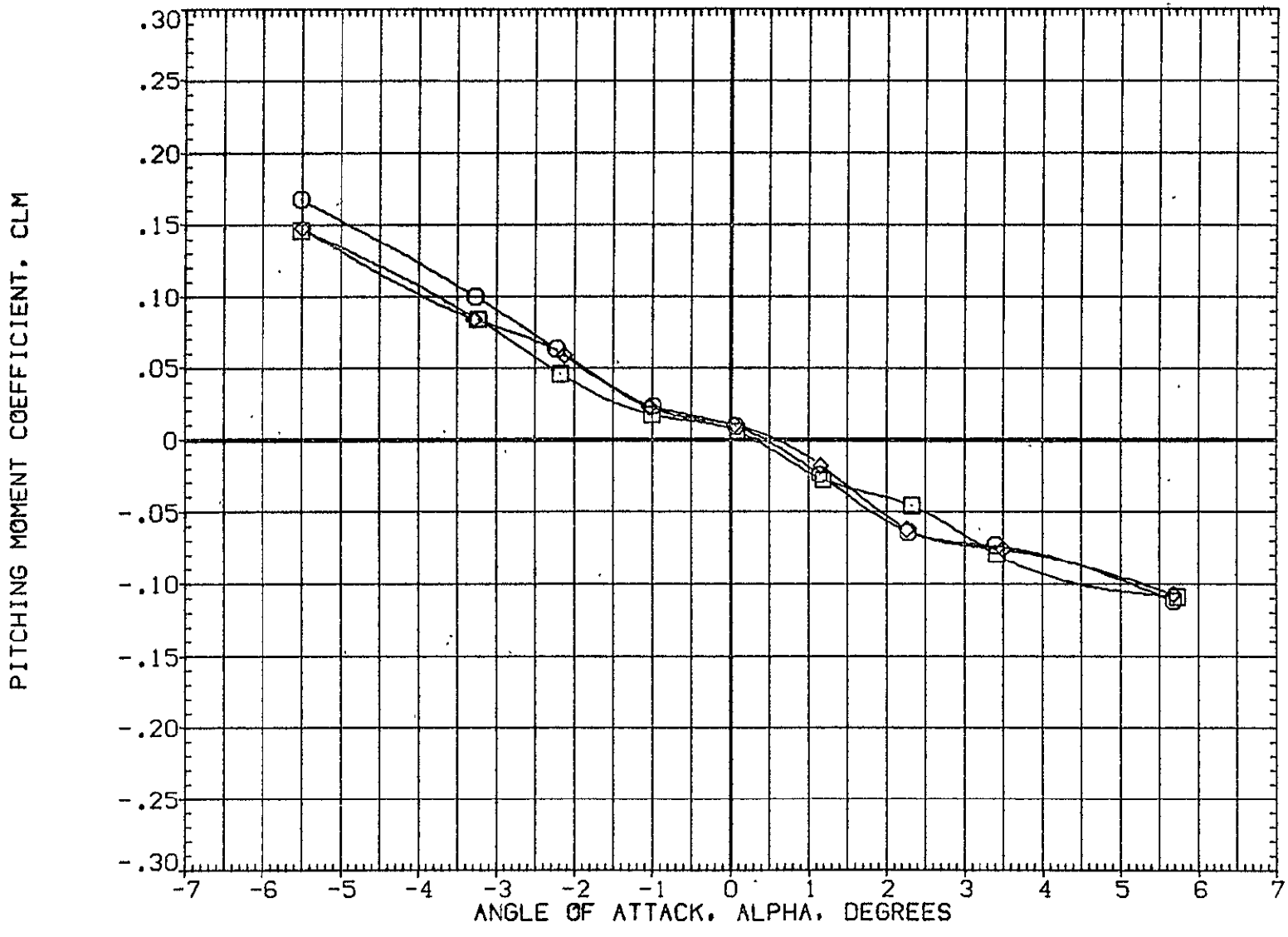


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L034)	□	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	□	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

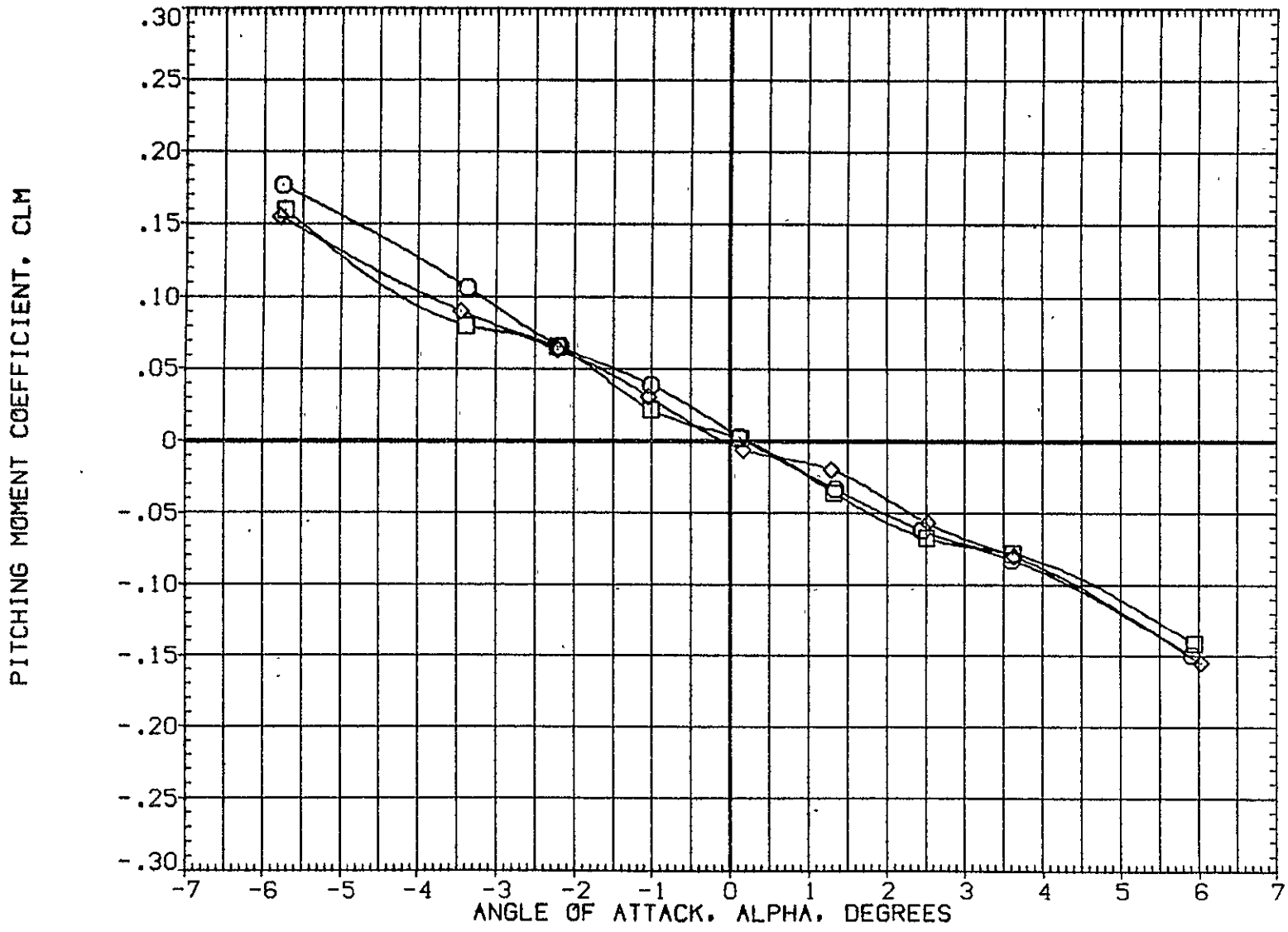


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO34)	○	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(AILO35)	□	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(AILO36)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

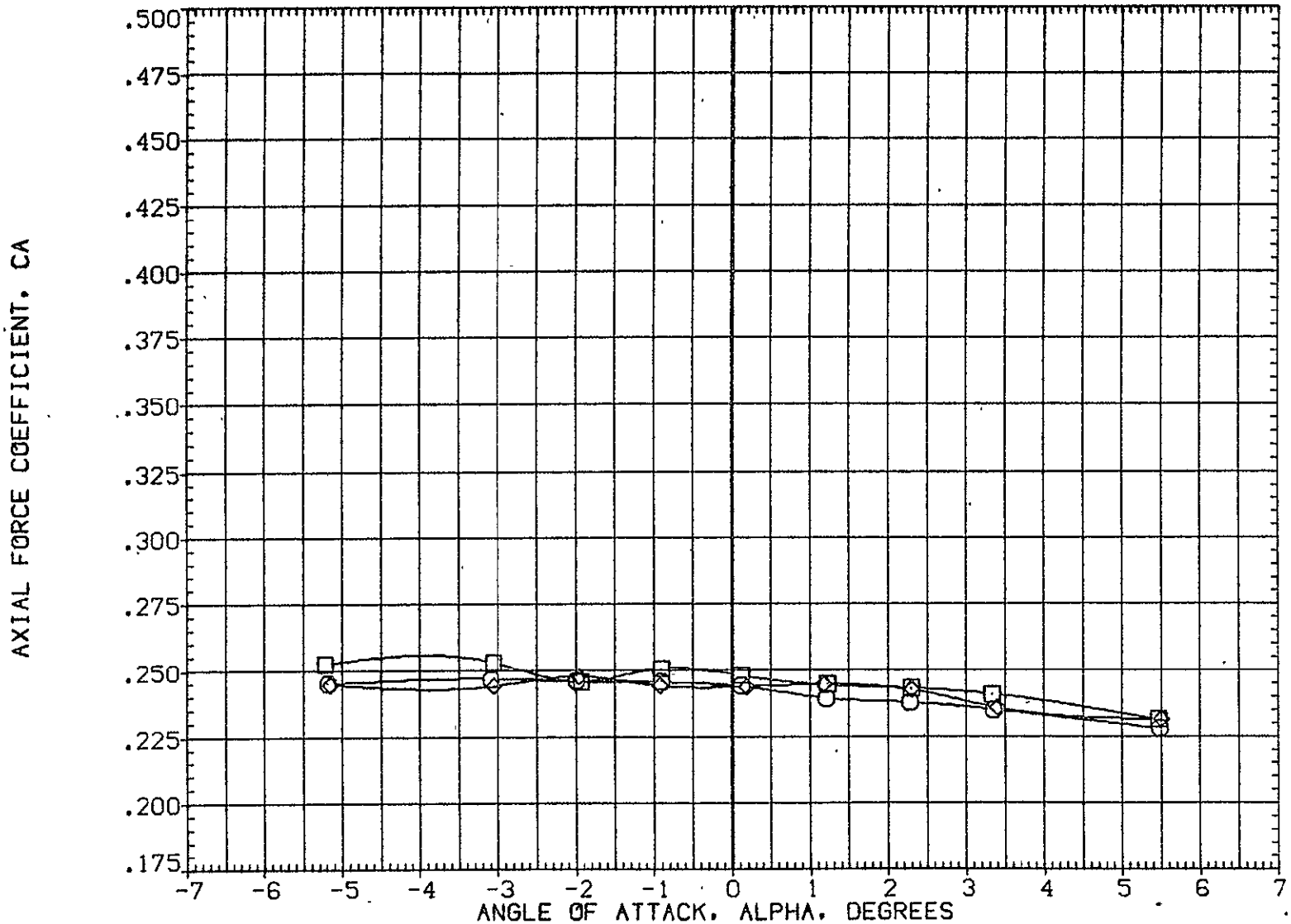


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS.

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L034)		MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)		MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)		MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

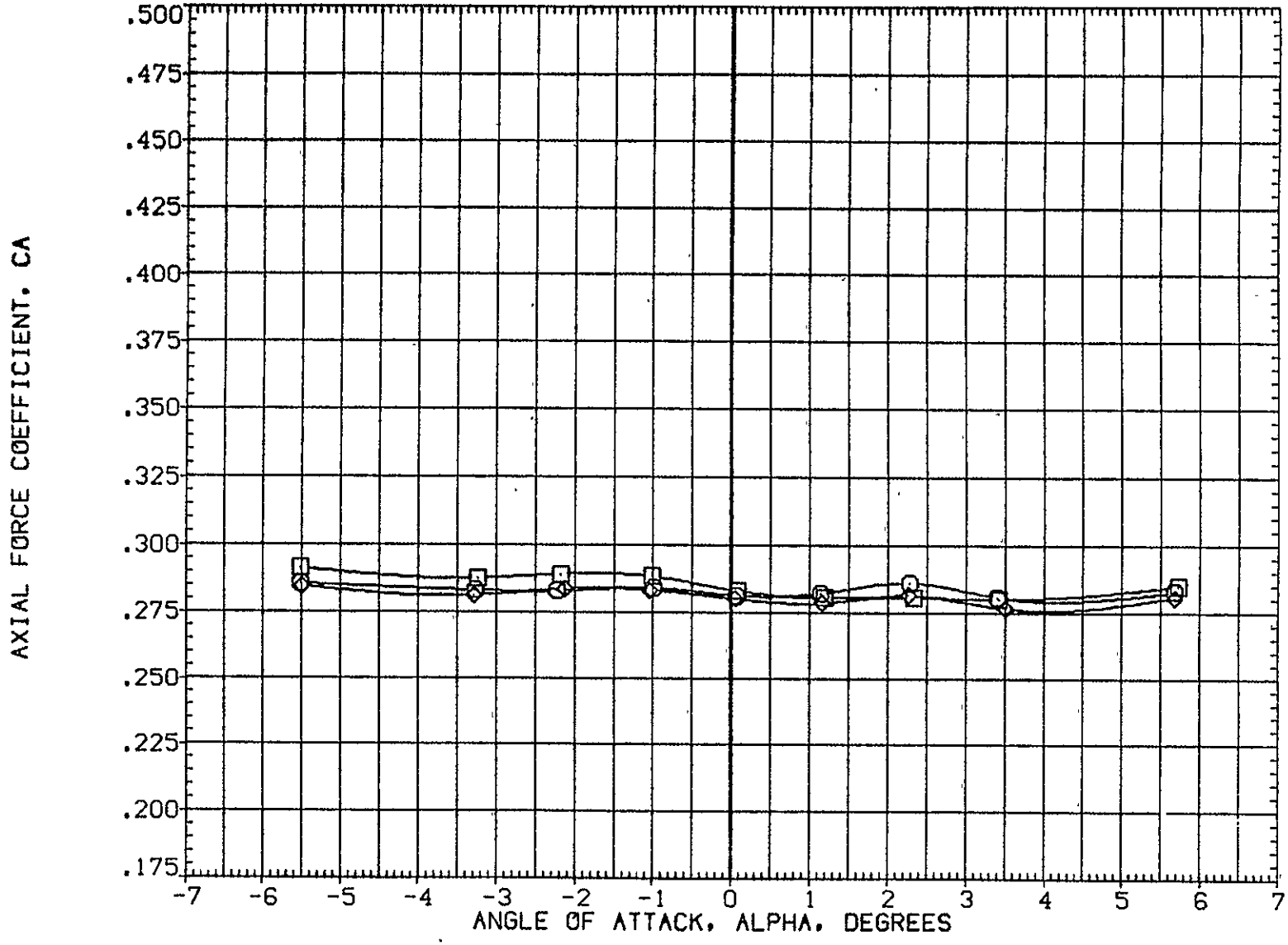


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO34)		MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(AILO35)		MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(AILO36)		MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

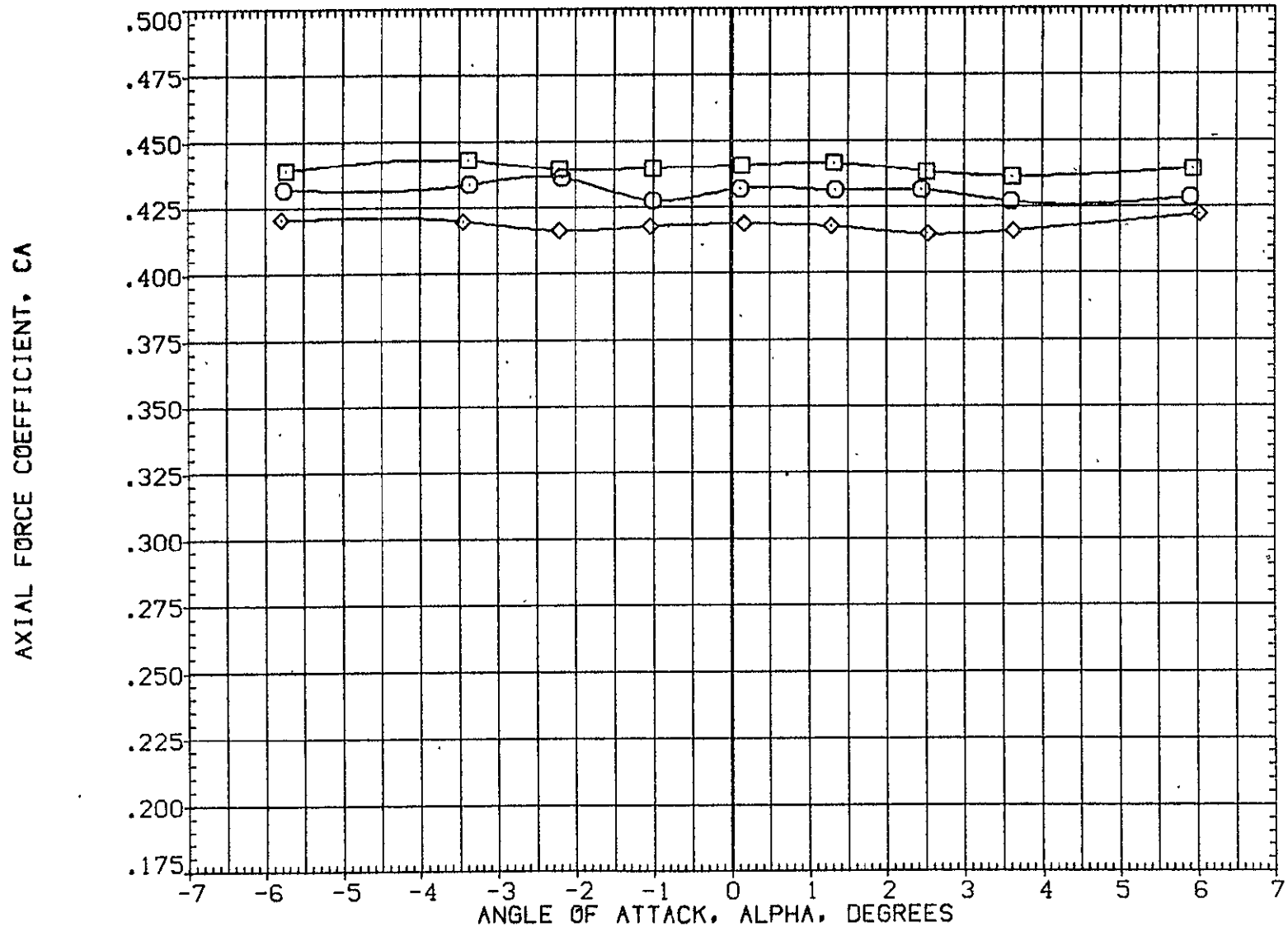


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO34)	○	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(AILO35)	□	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(AILO36)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1.	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

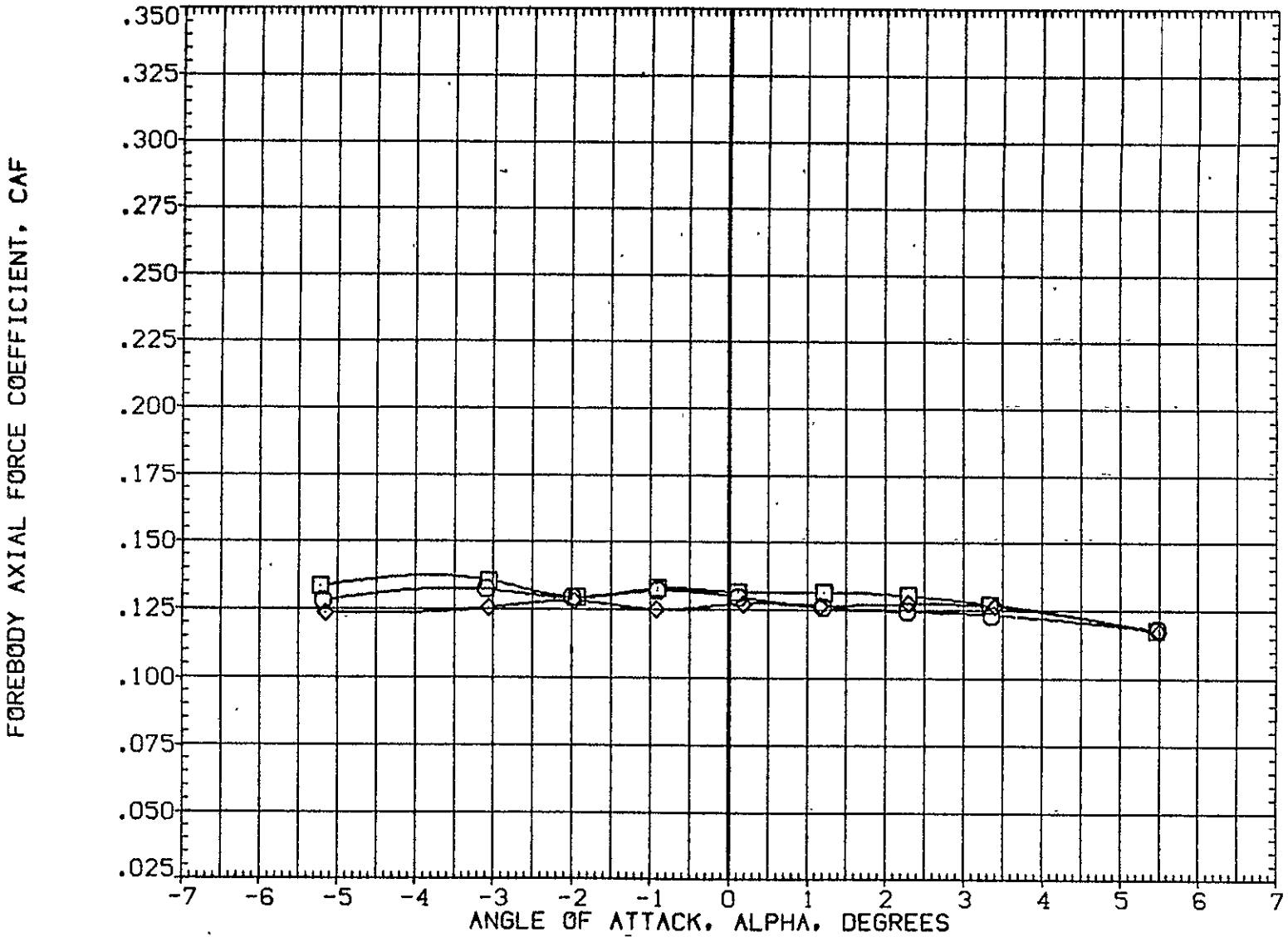


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L034)	○	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	□	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

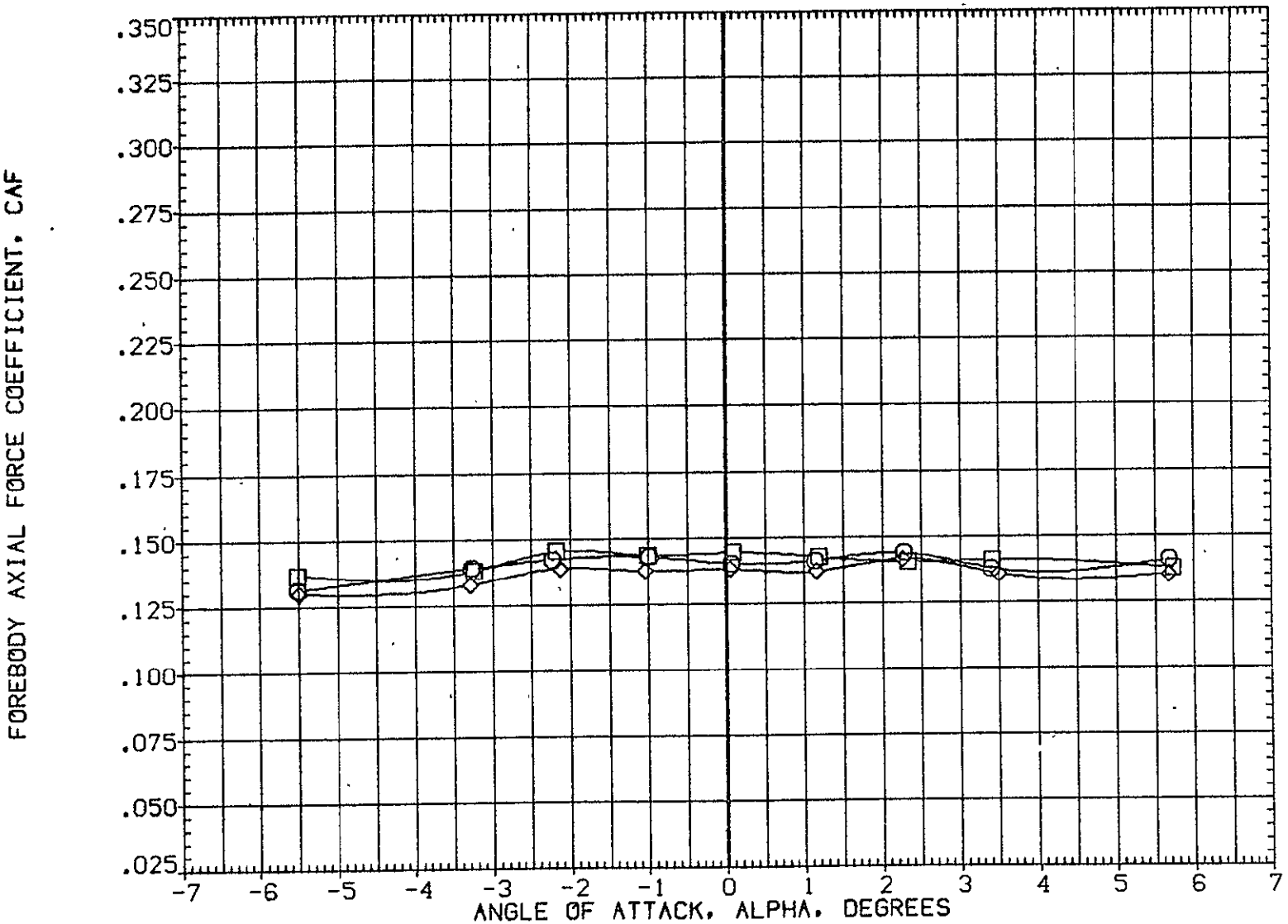


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L034)	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

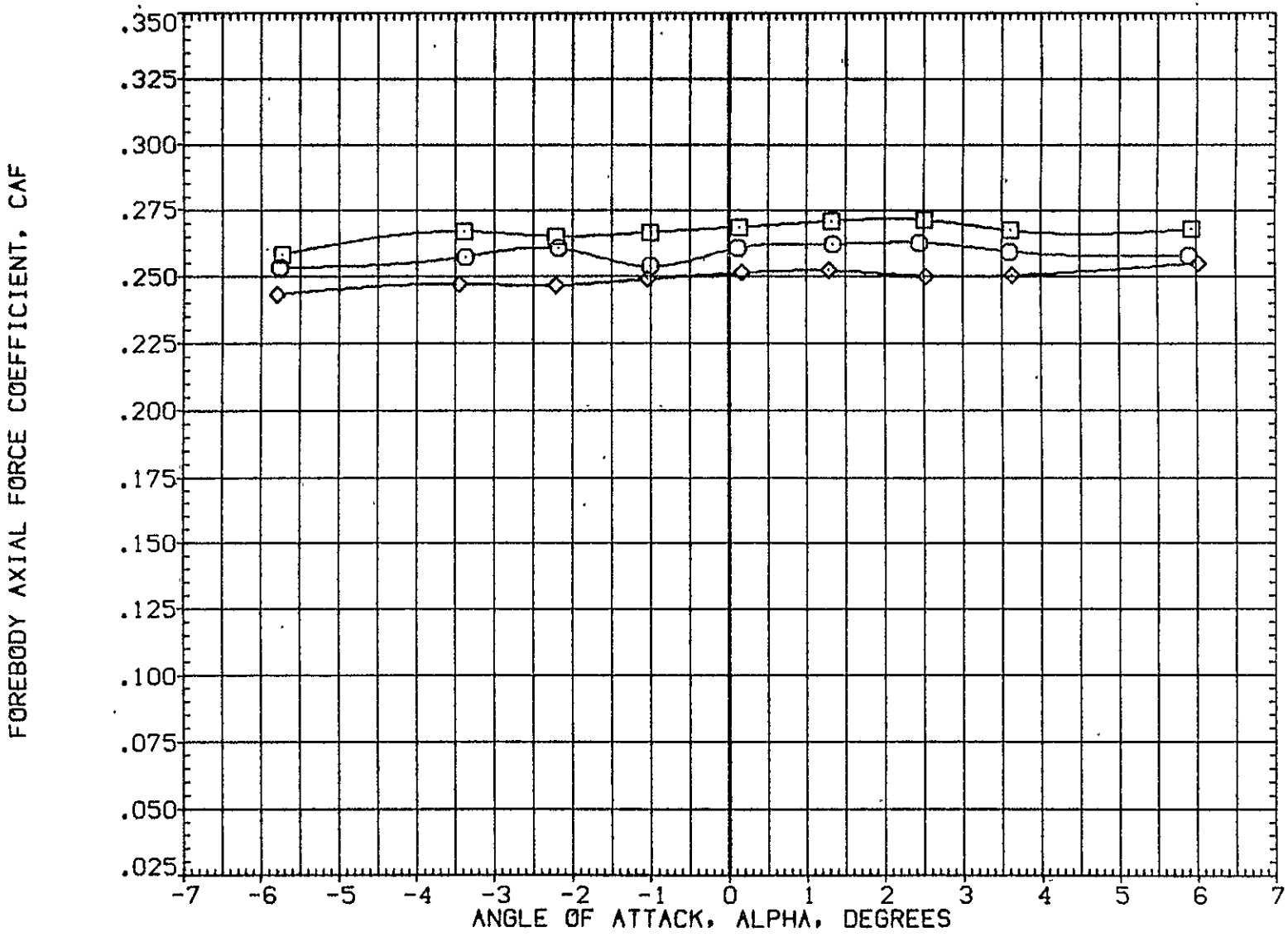


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L034)	○	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	□	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

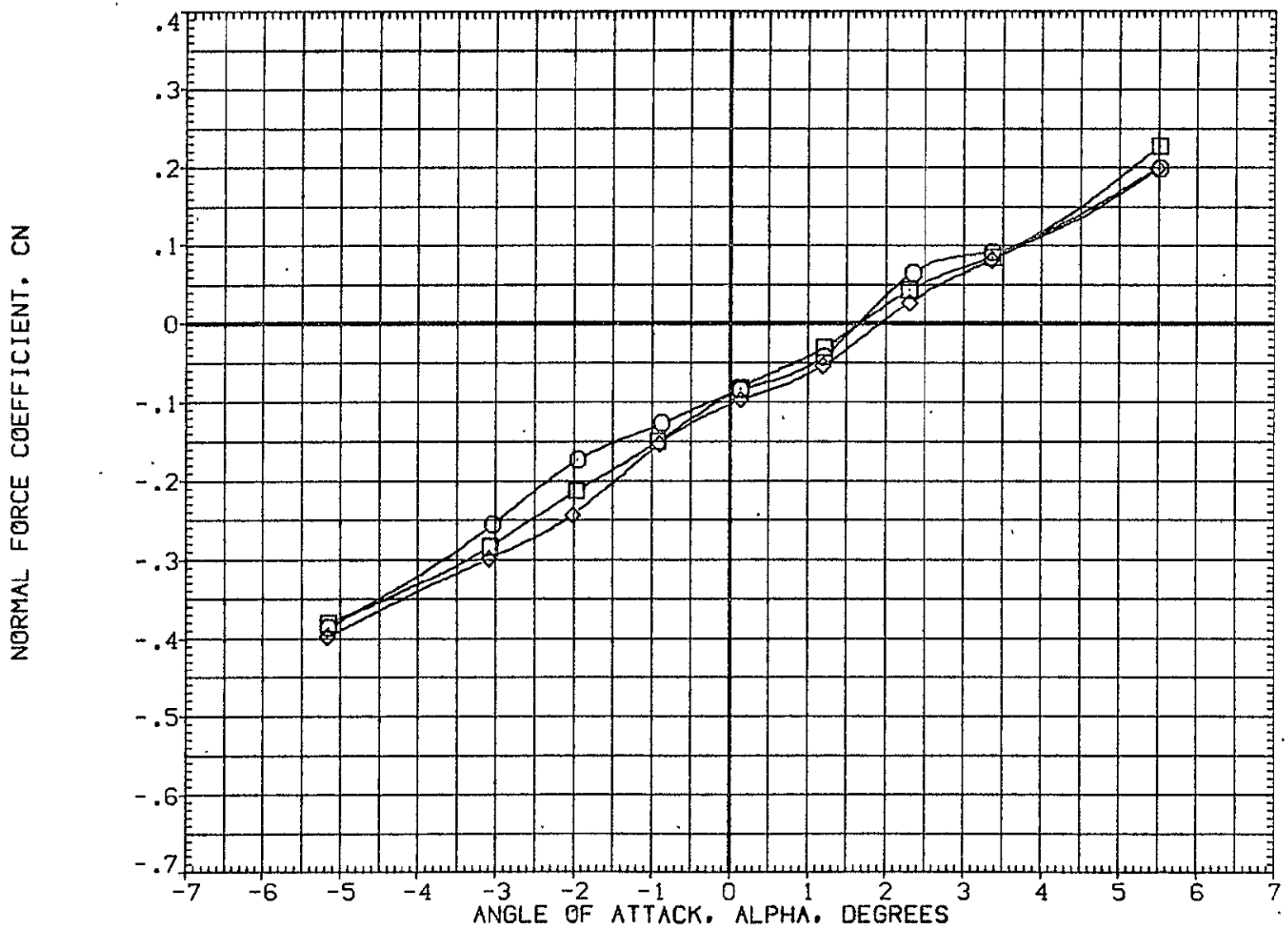


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

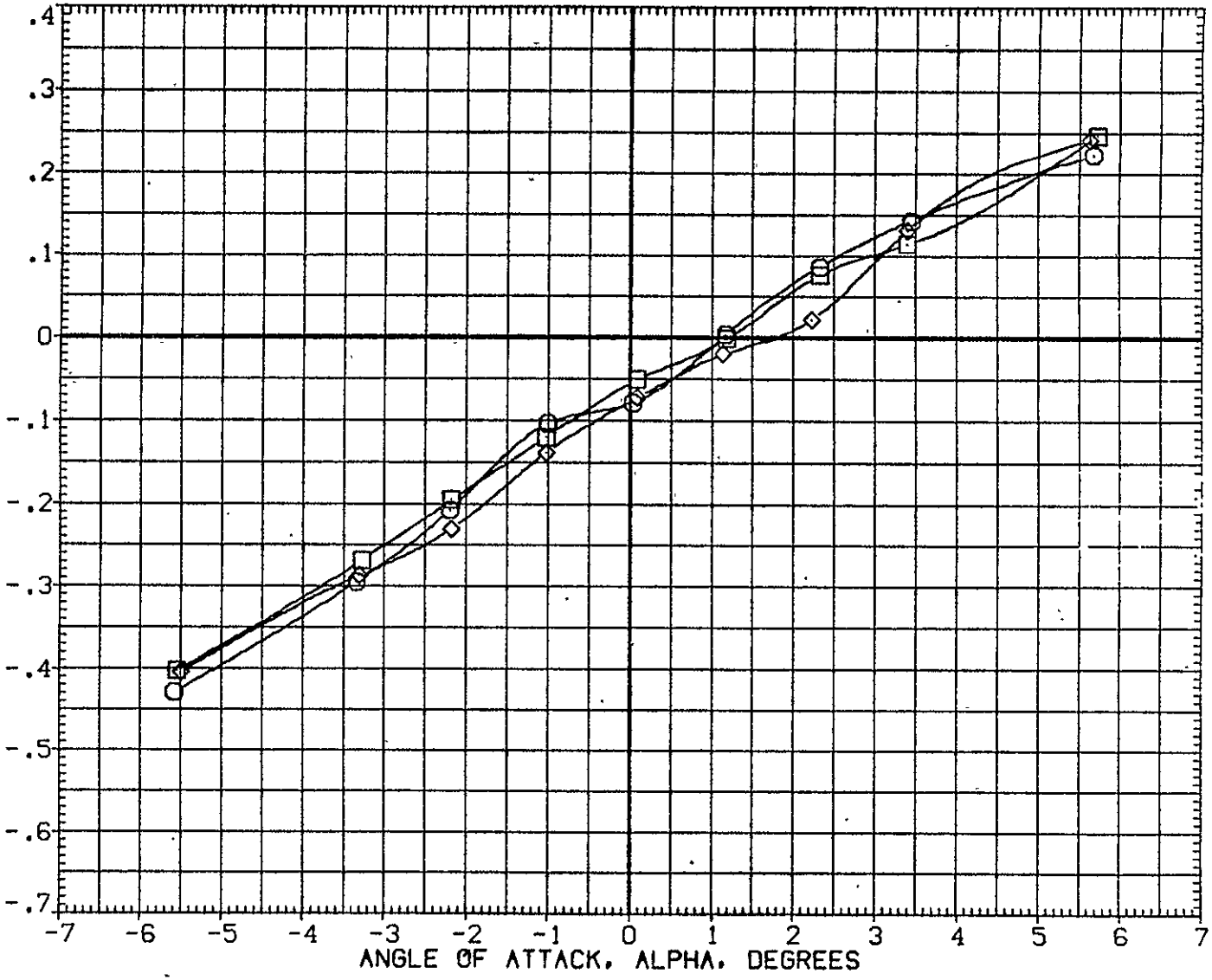


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)		MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)		MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)		MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

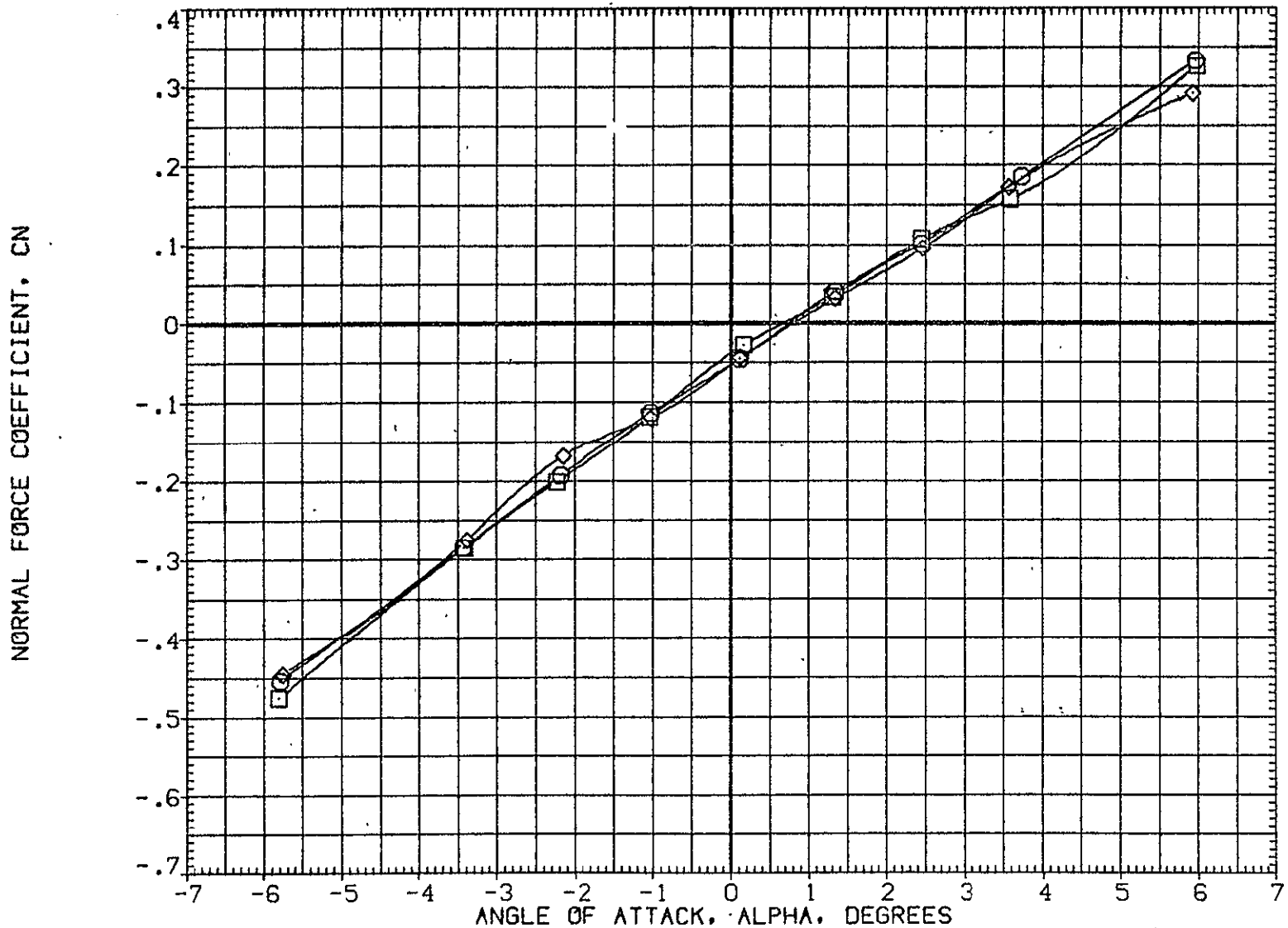


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

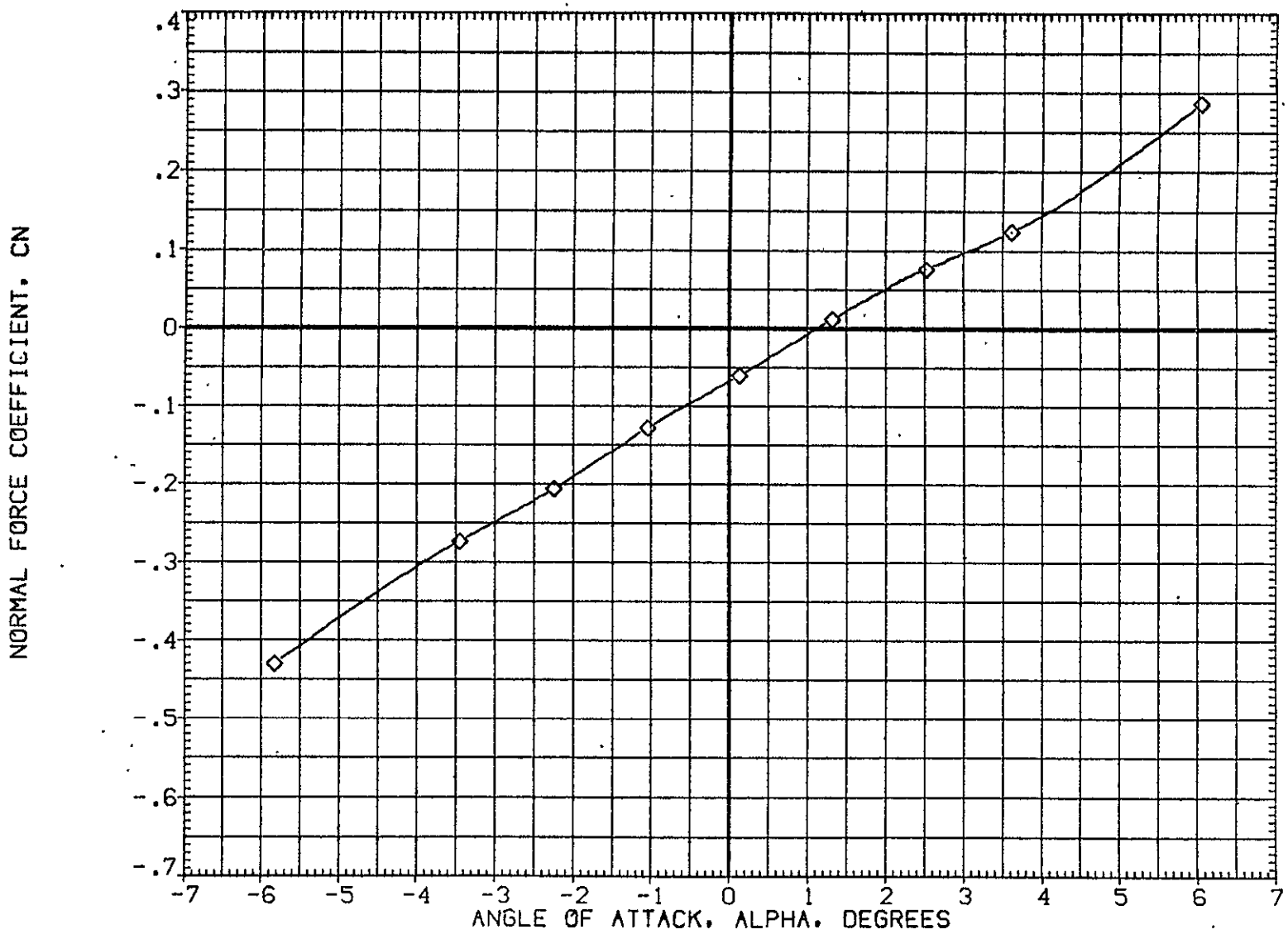


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L038)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	G2T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

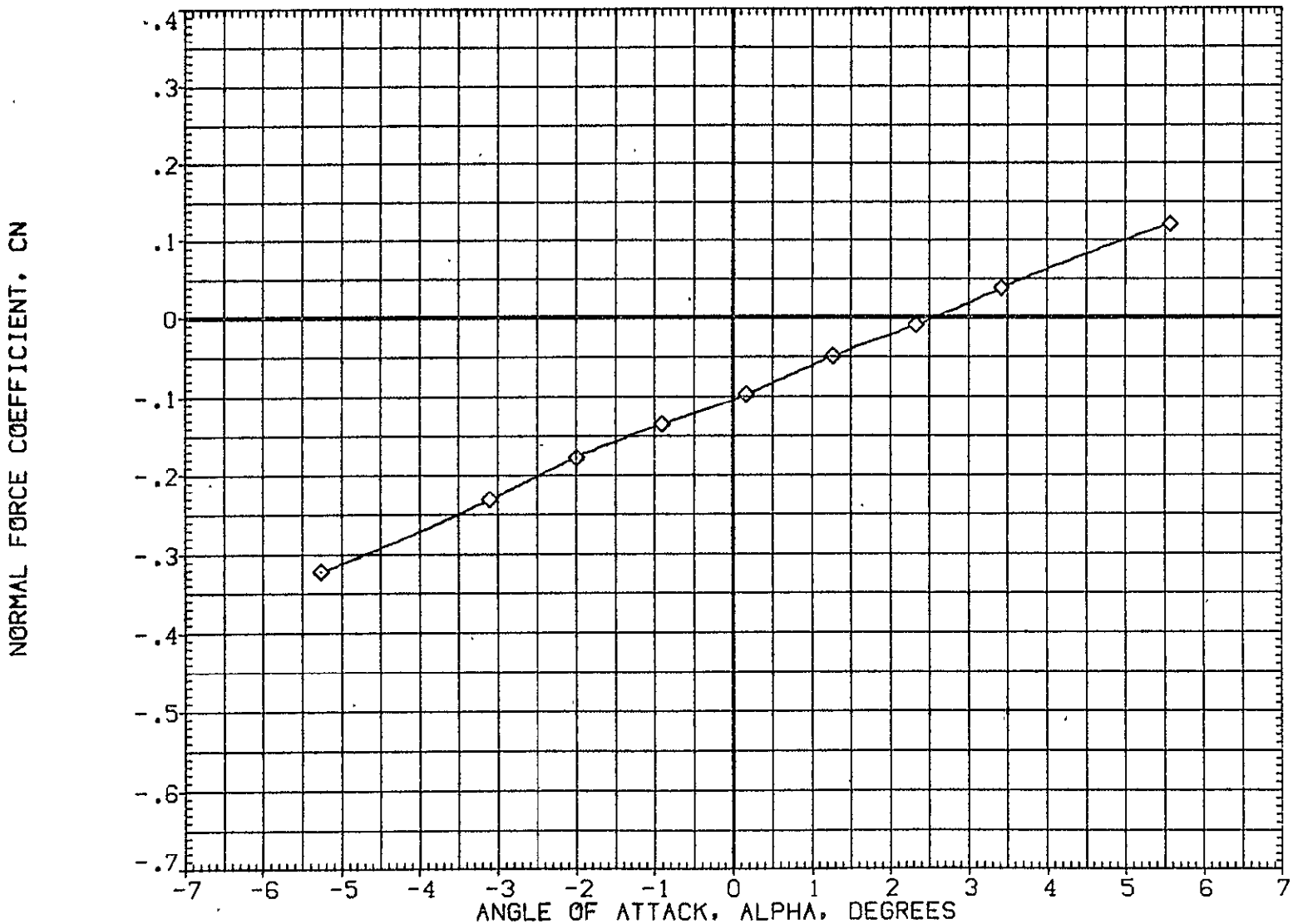


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS -

(D)MACH = 1.97

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L038)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

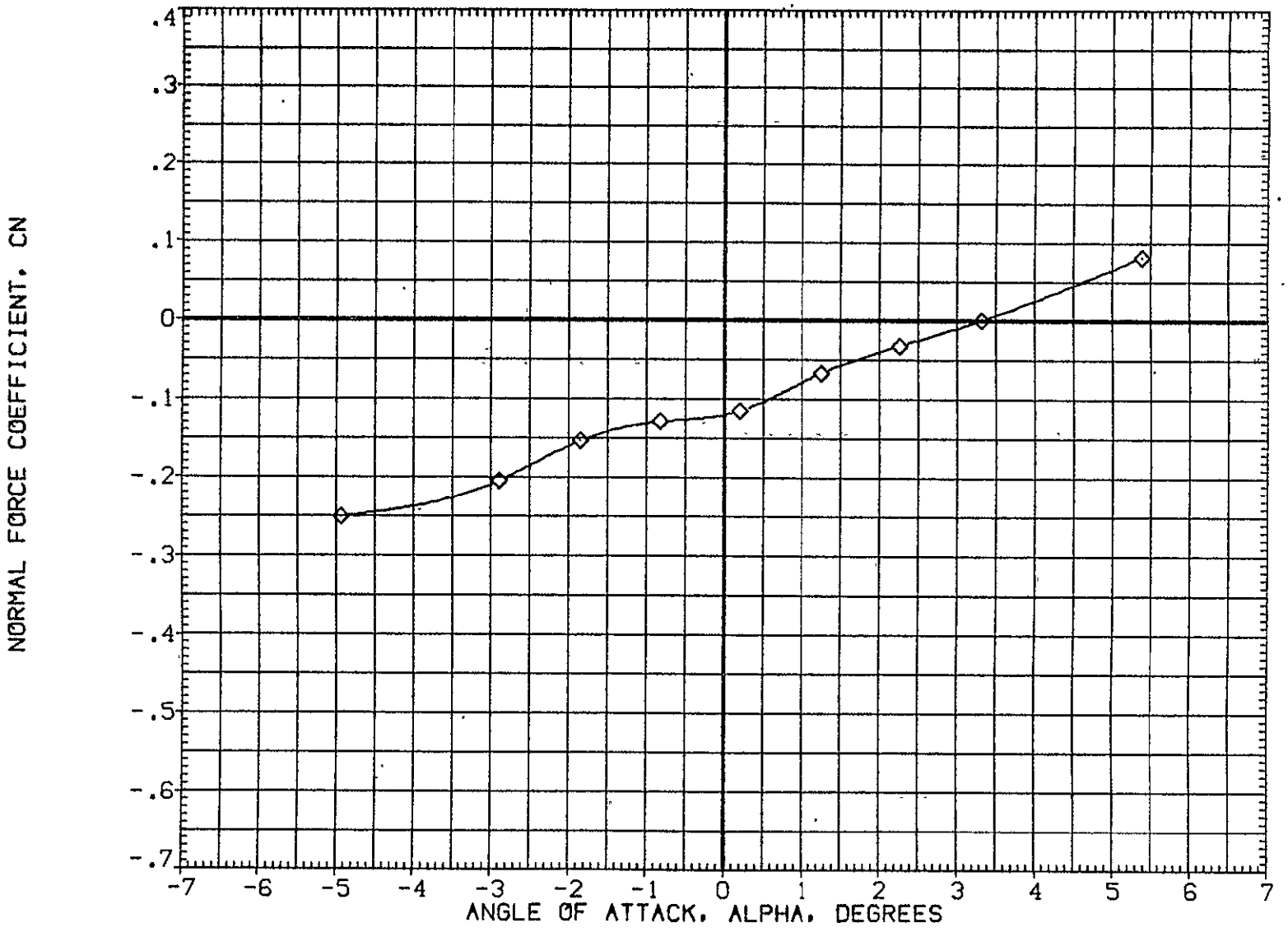


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO37)	○	DATA NOT AVAILABLE.		.000	.000	90.000	.140
(AILO38)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO39)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

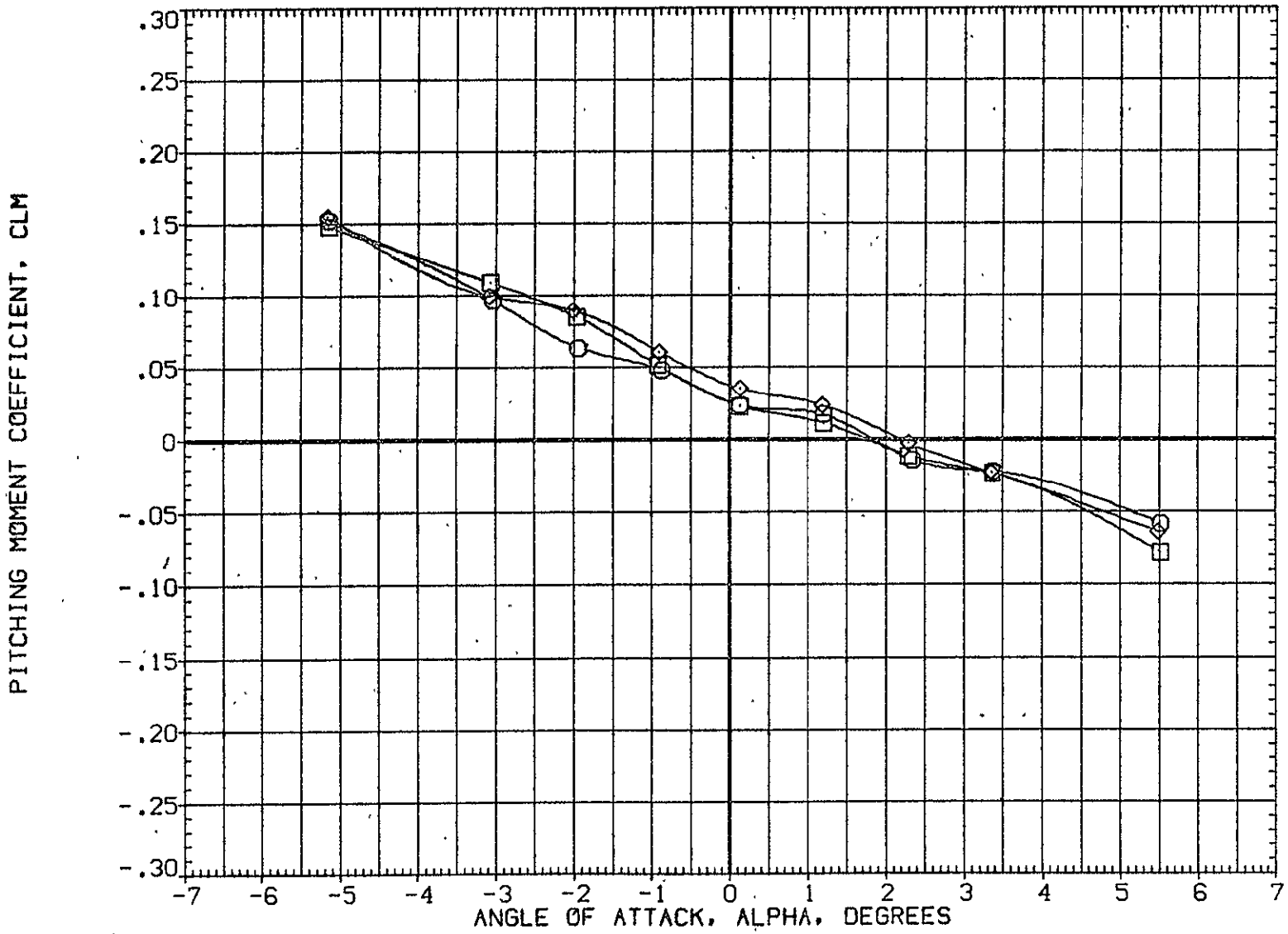


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

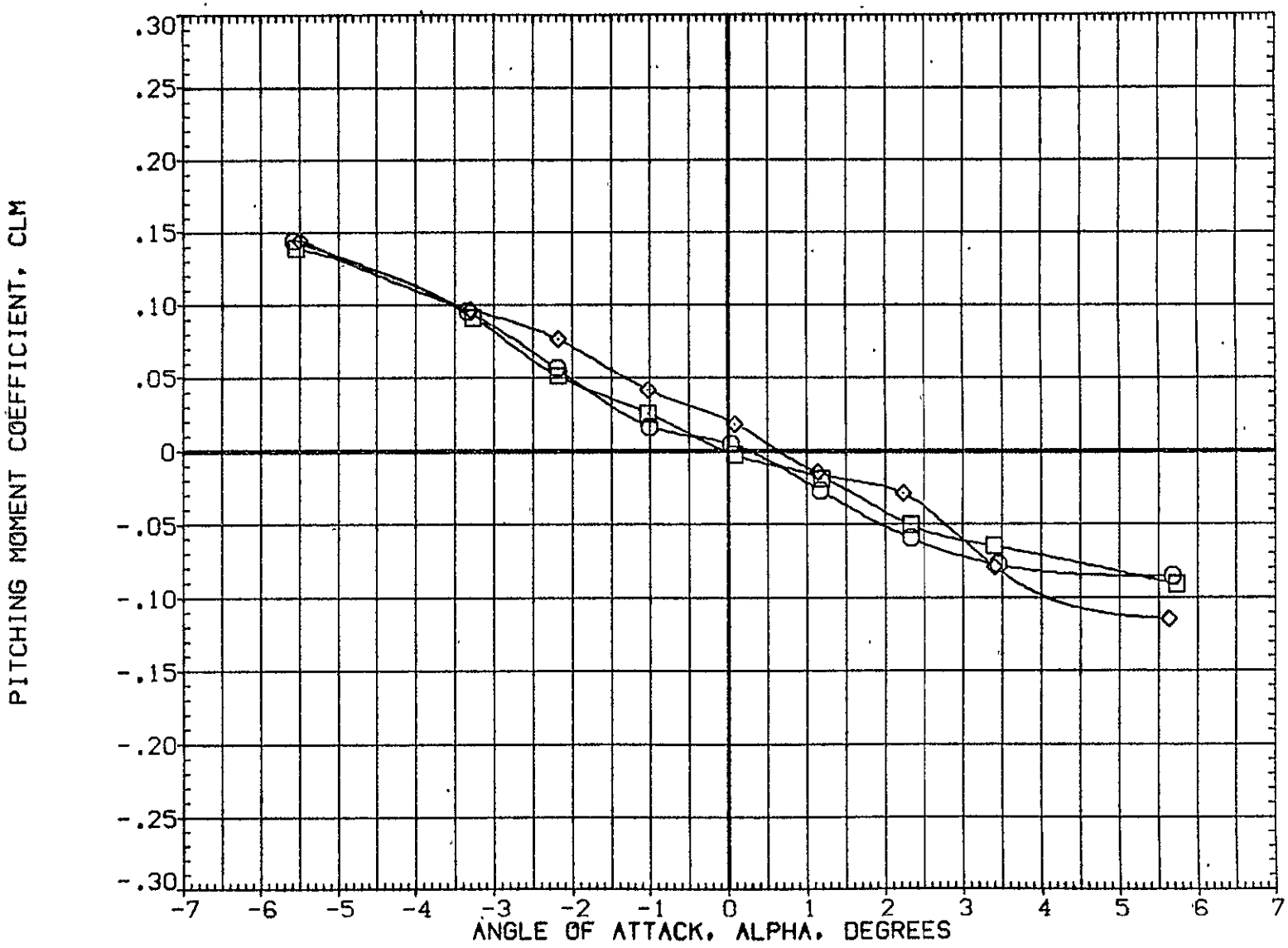


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

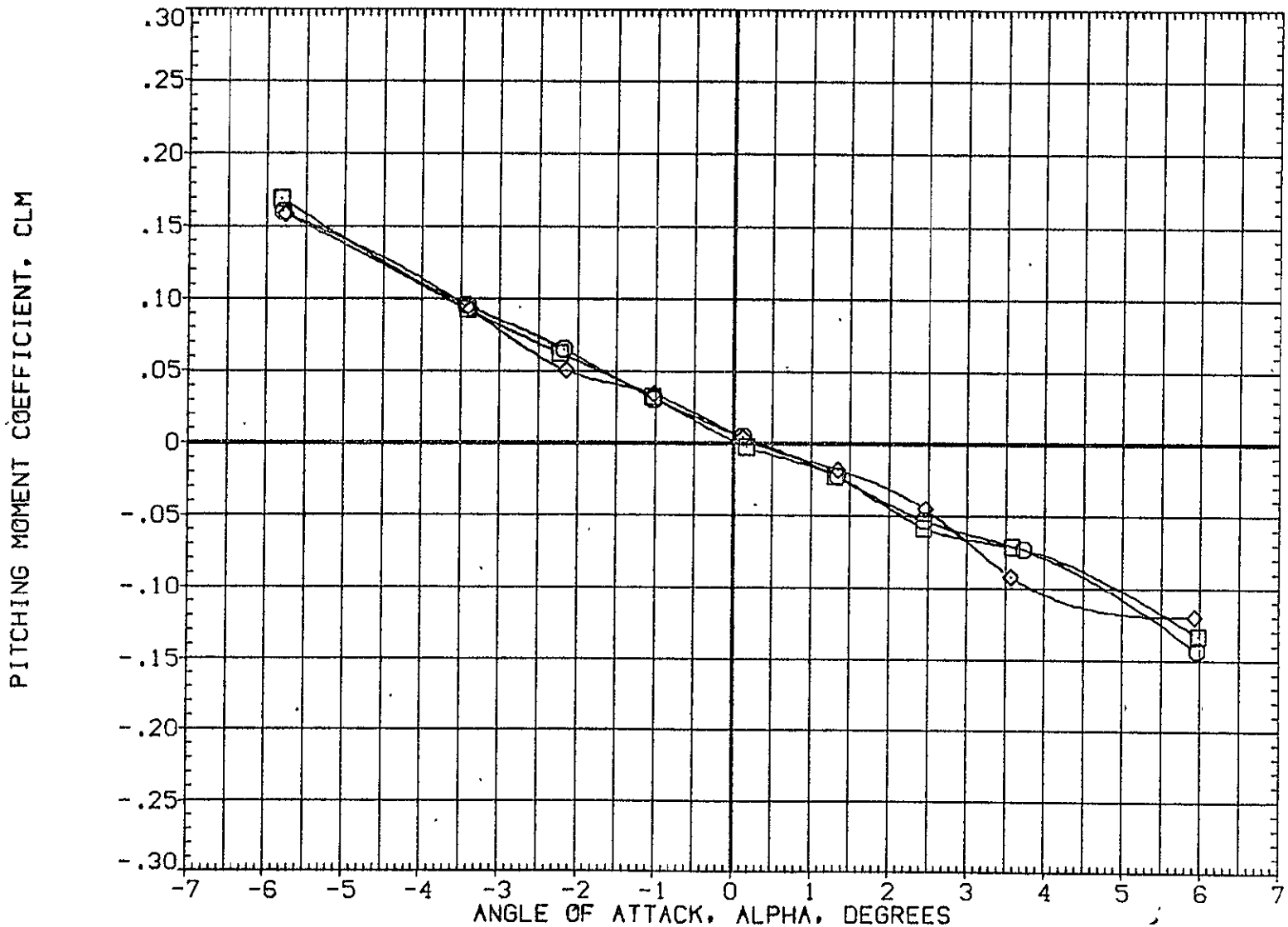


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO37)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(AILO38)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(AILO39)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

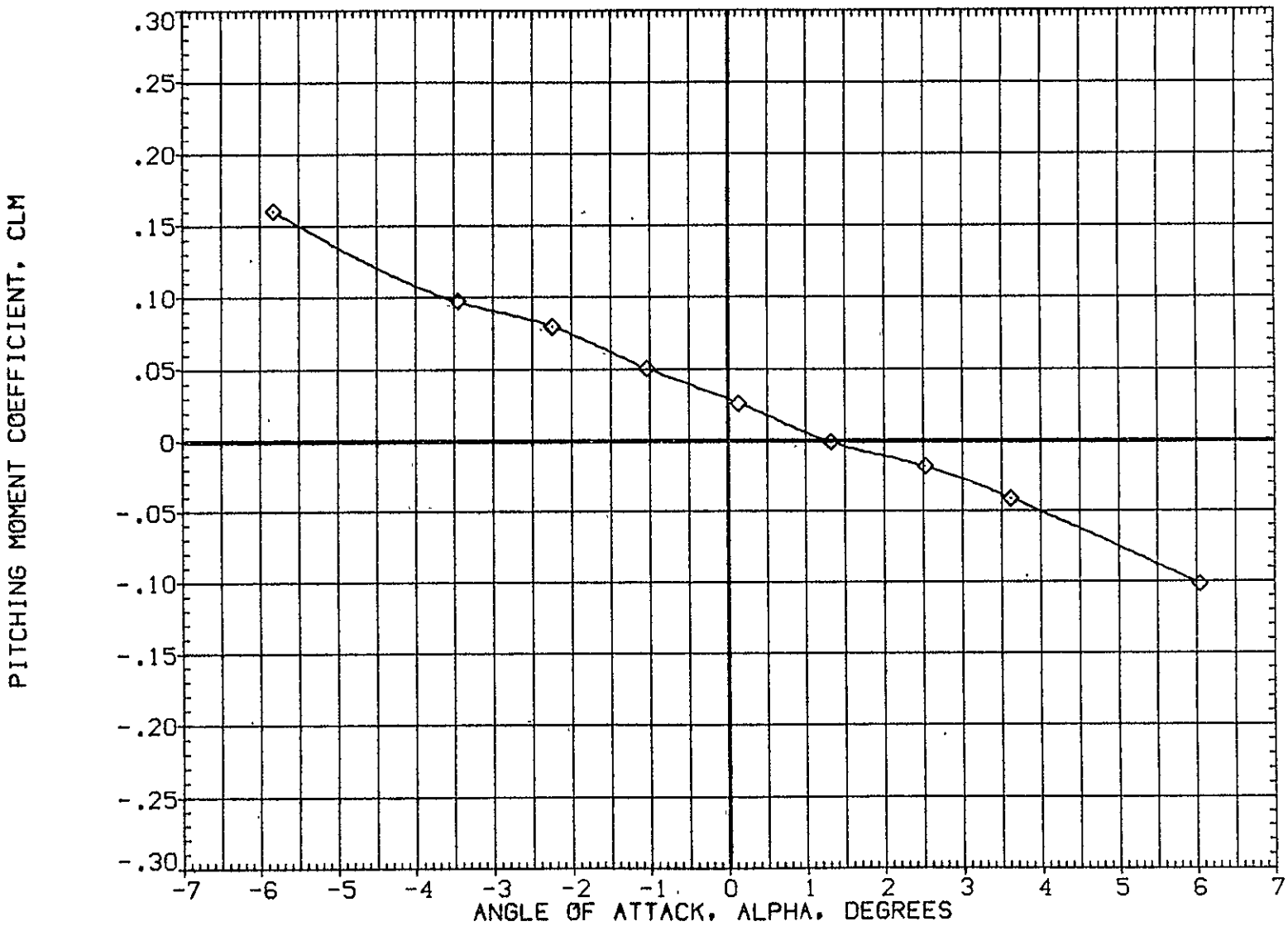


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	▭	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L038)	▭	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

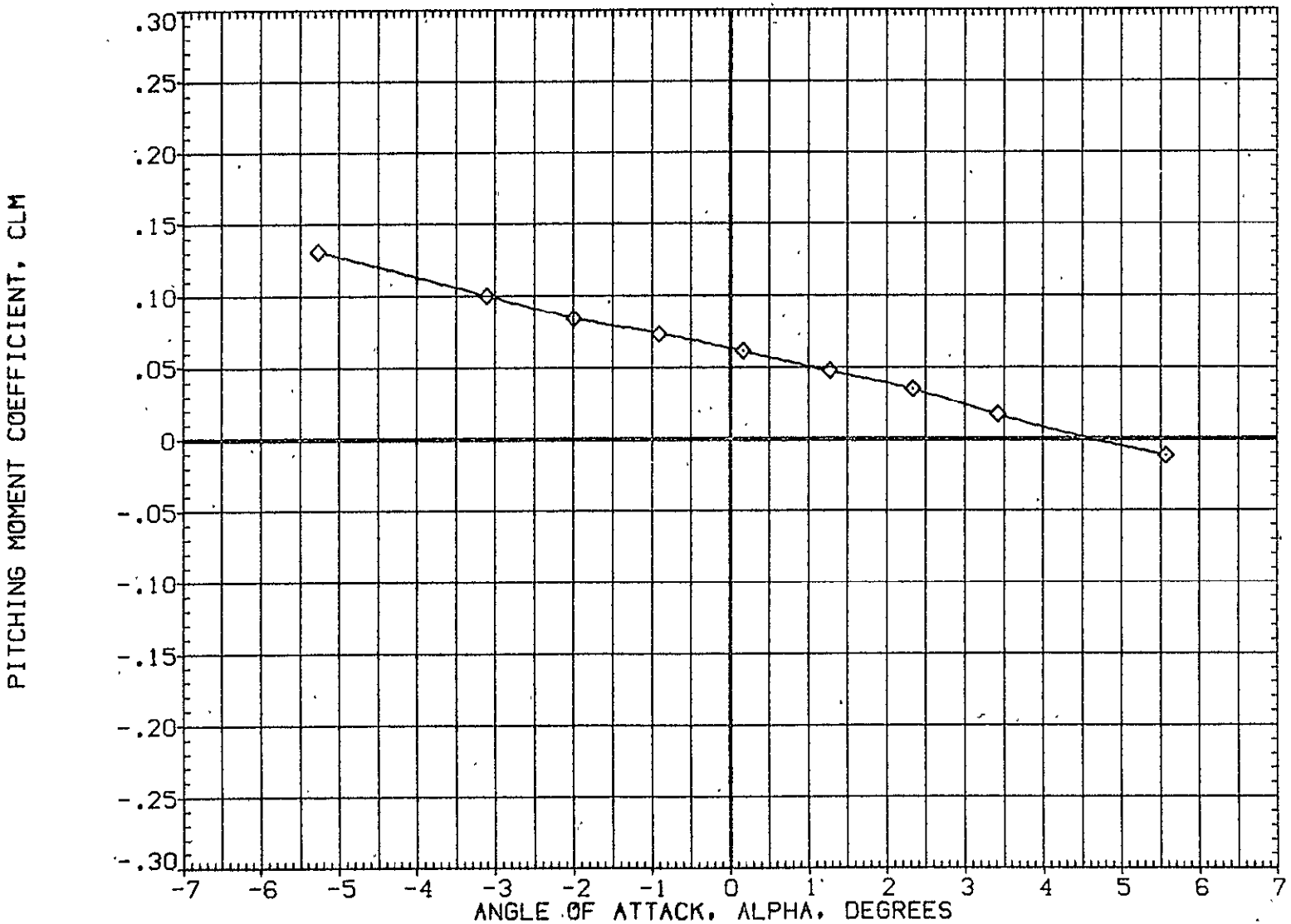


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.97

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO37)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO38)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO39)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	-.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

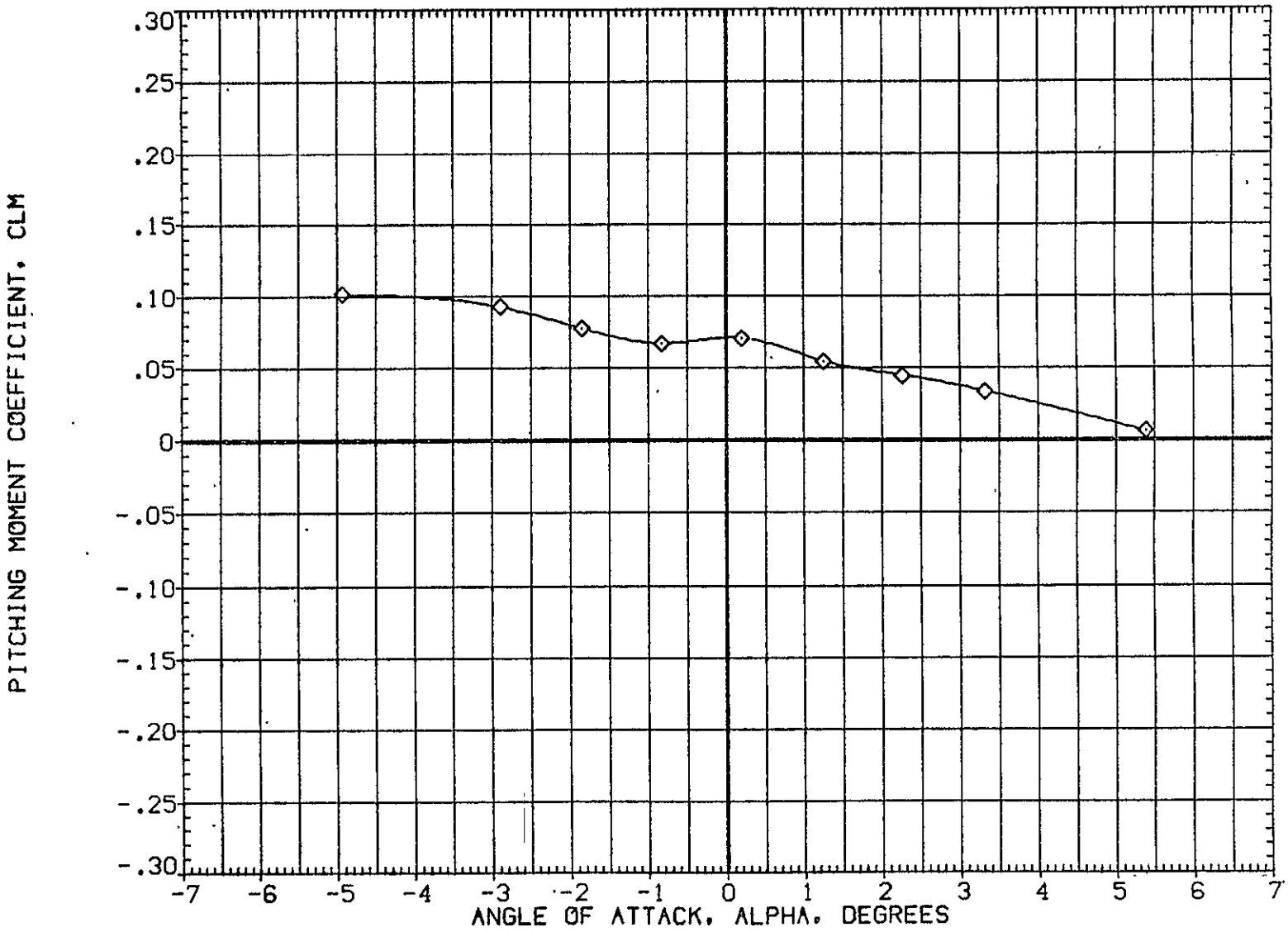


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L038)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

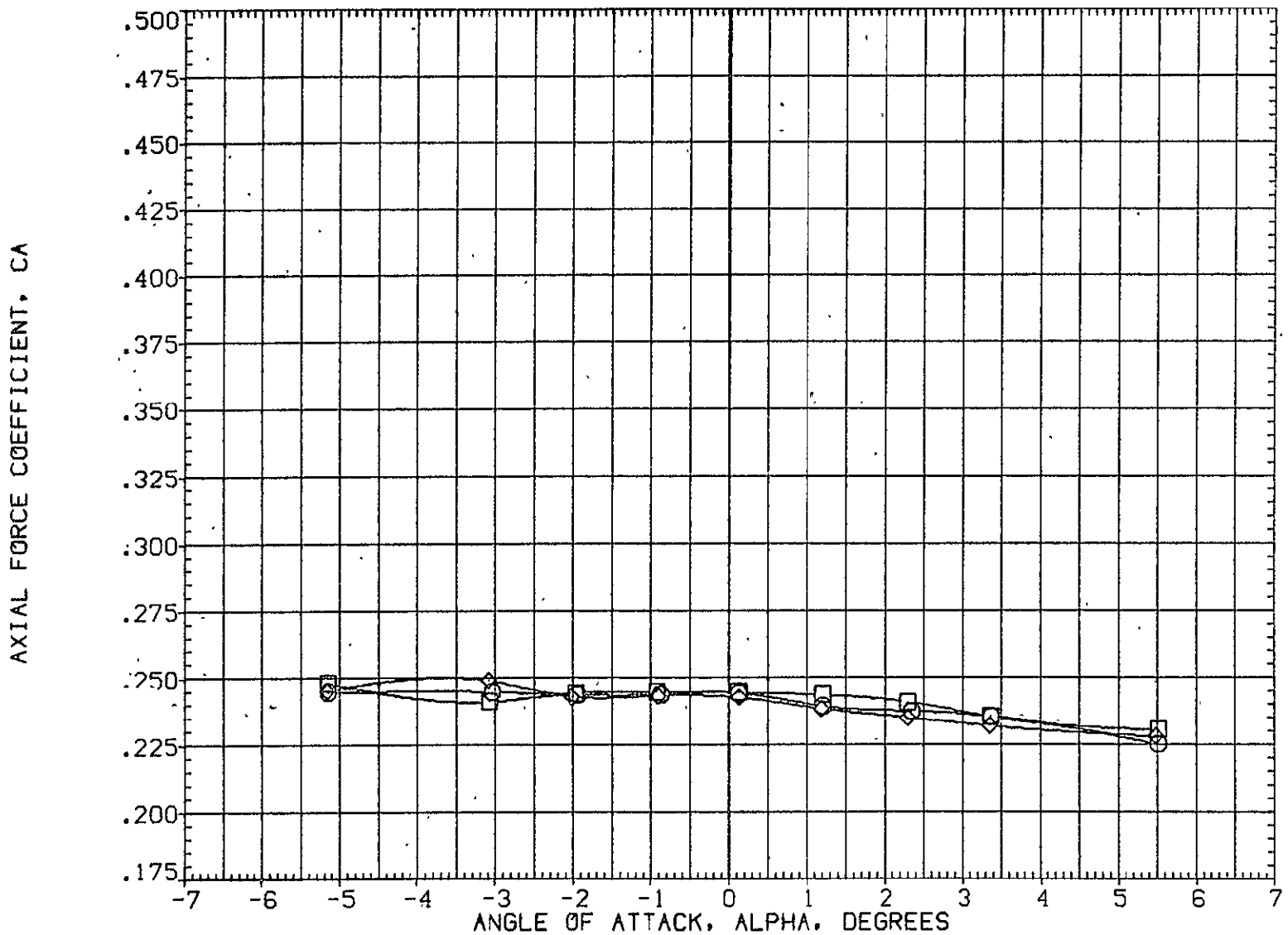


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)		MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)		MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)		MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

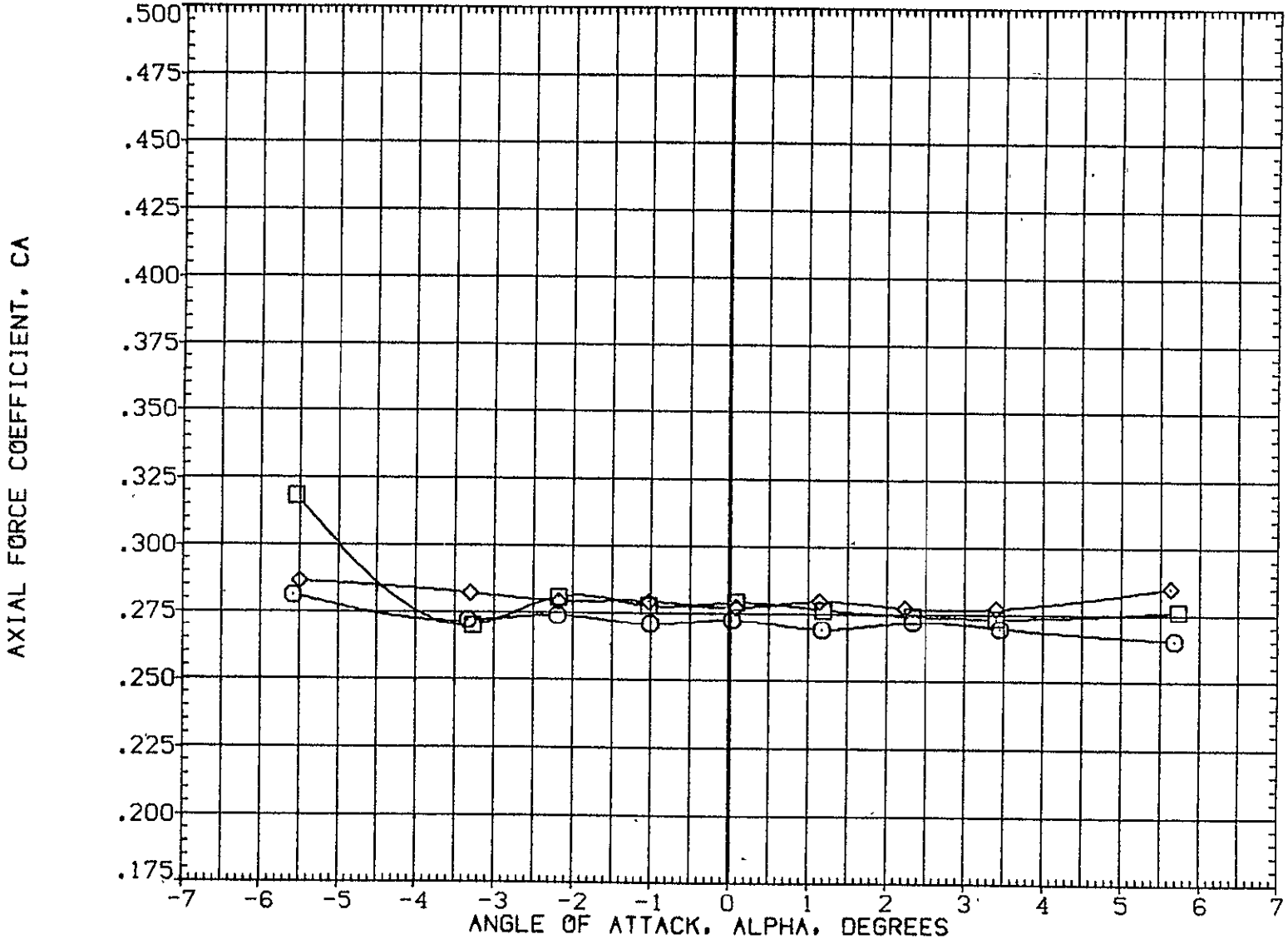


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

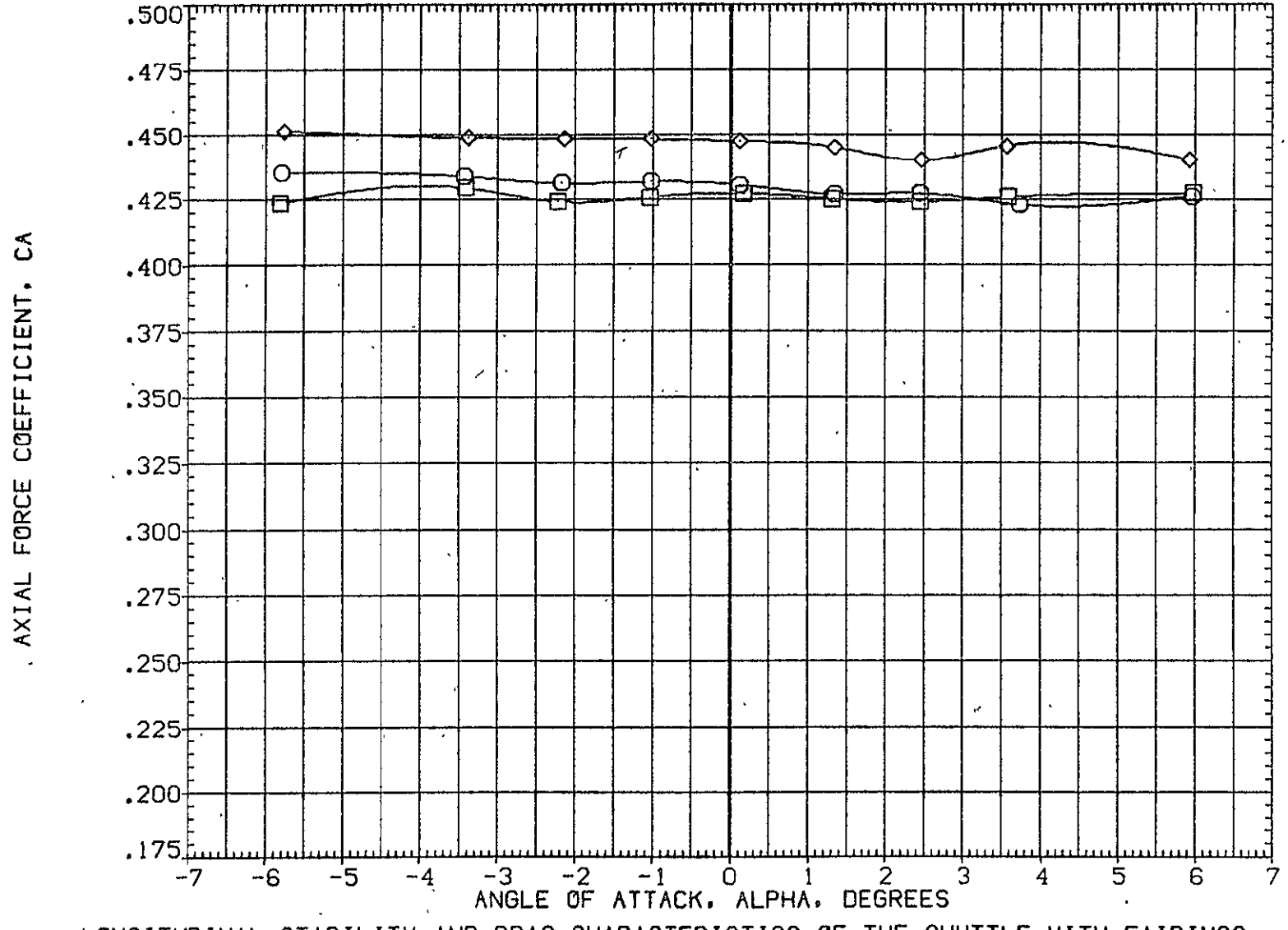


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

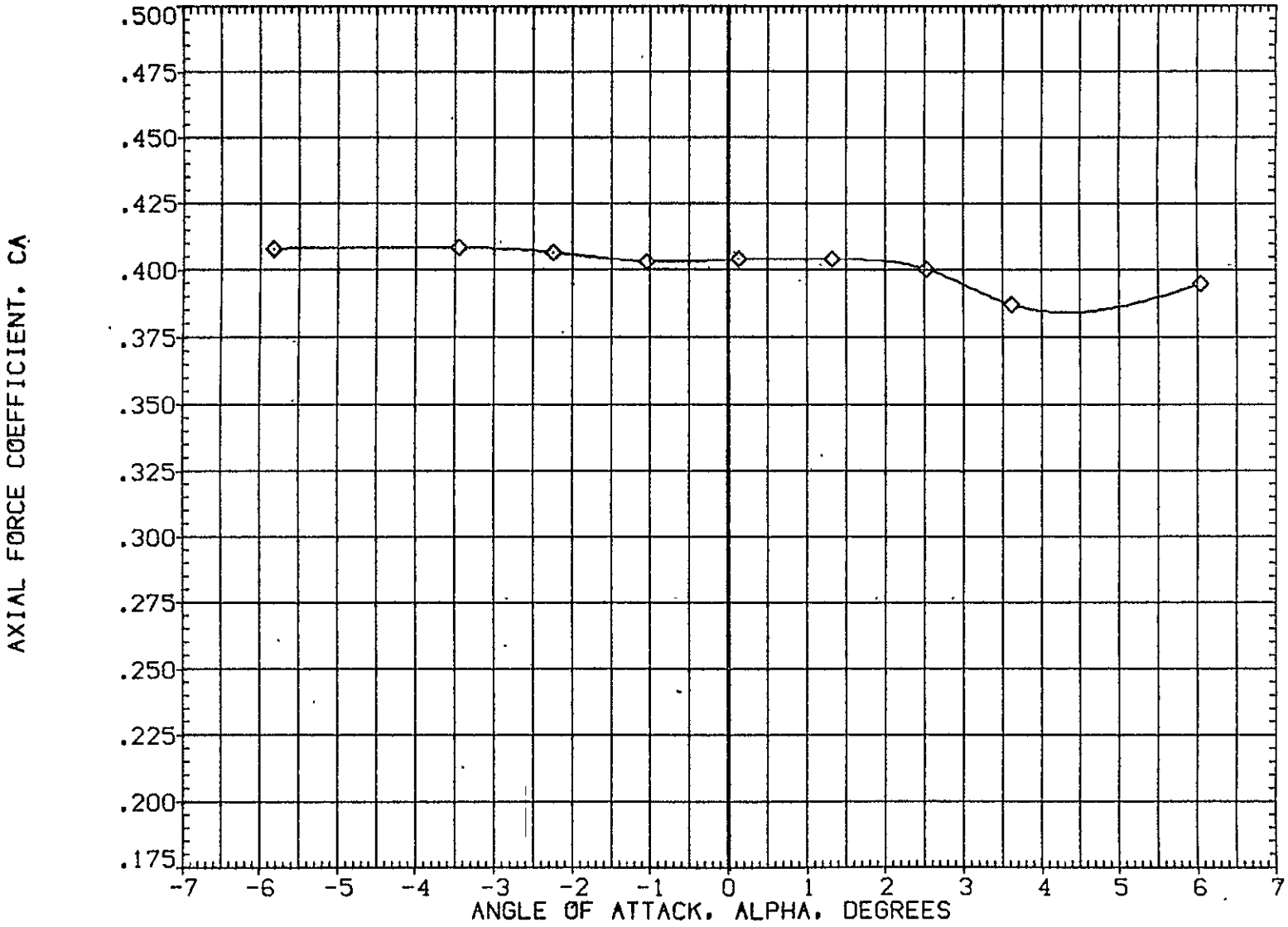


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L038)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

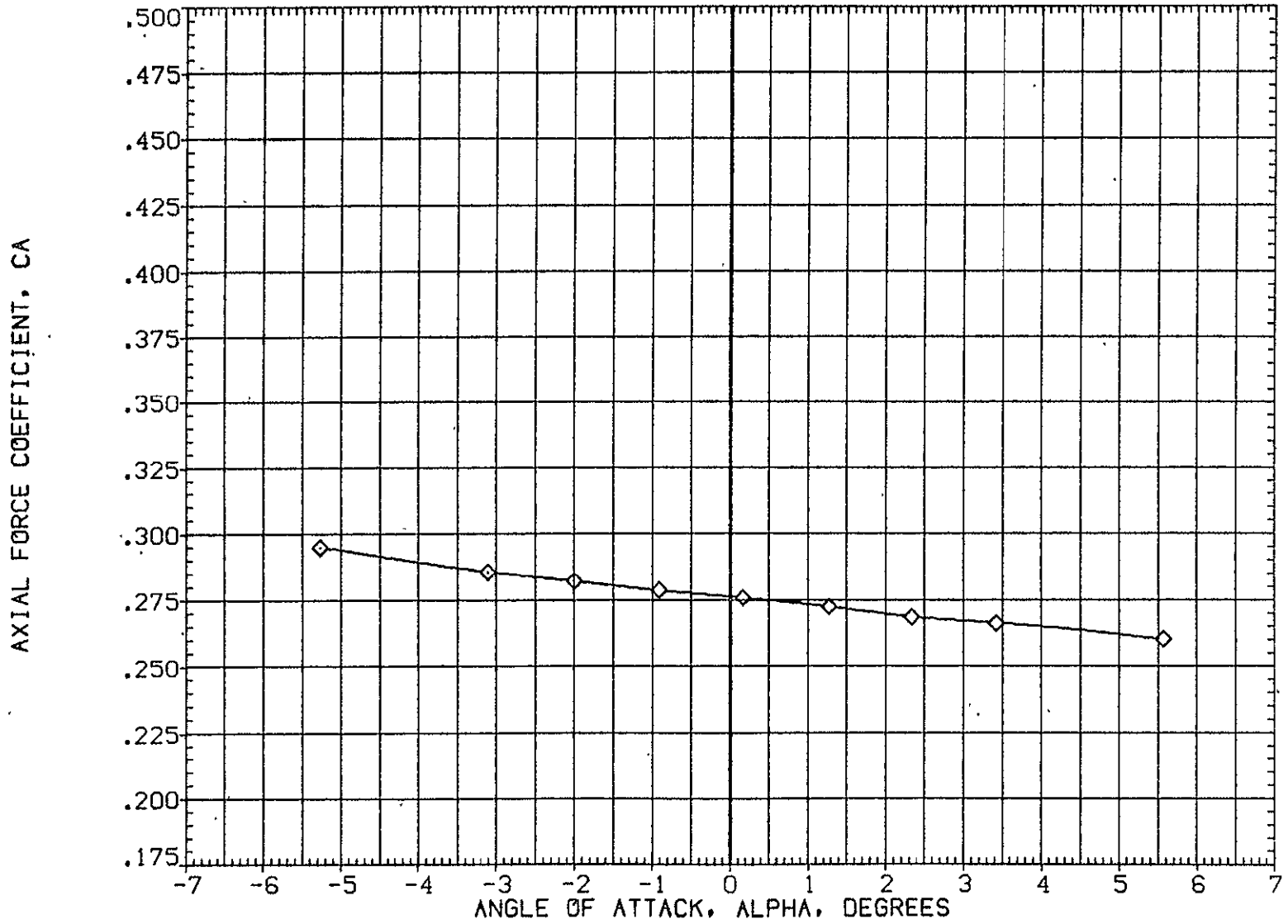


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.97

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL037)	○	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AIL038)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AIL039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

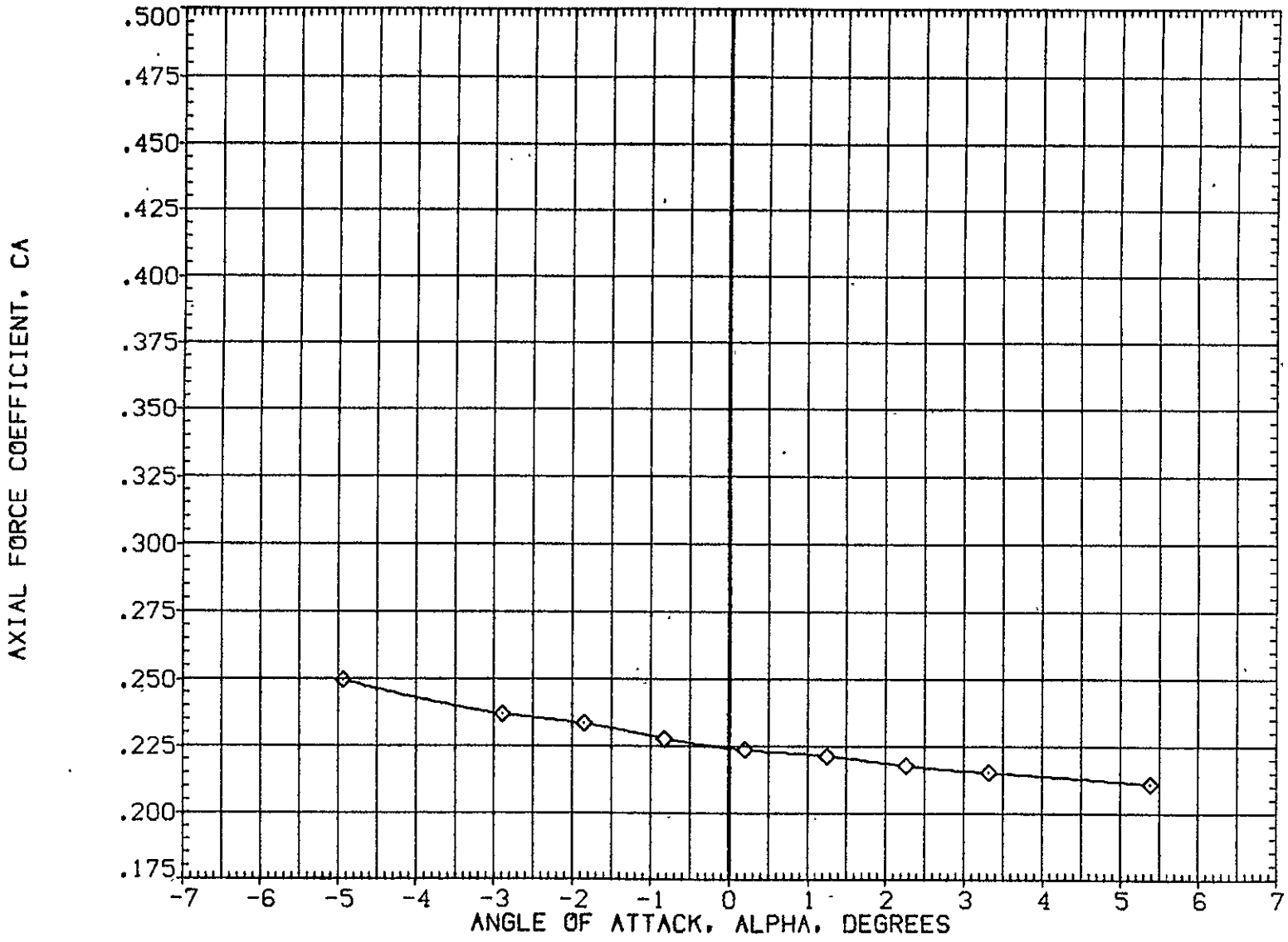


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL037)	▭	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AIL038)	▭	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AIL039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

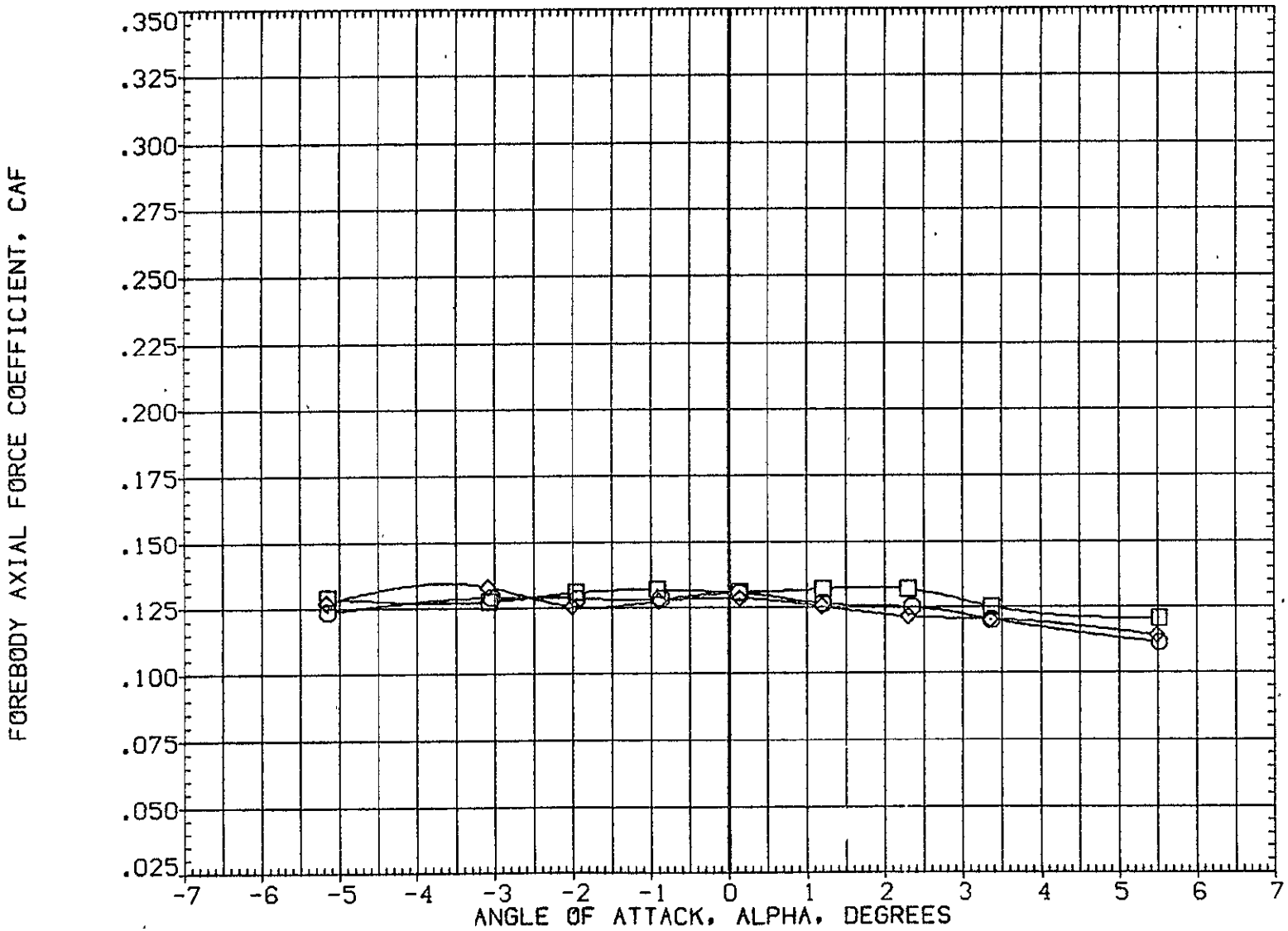


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

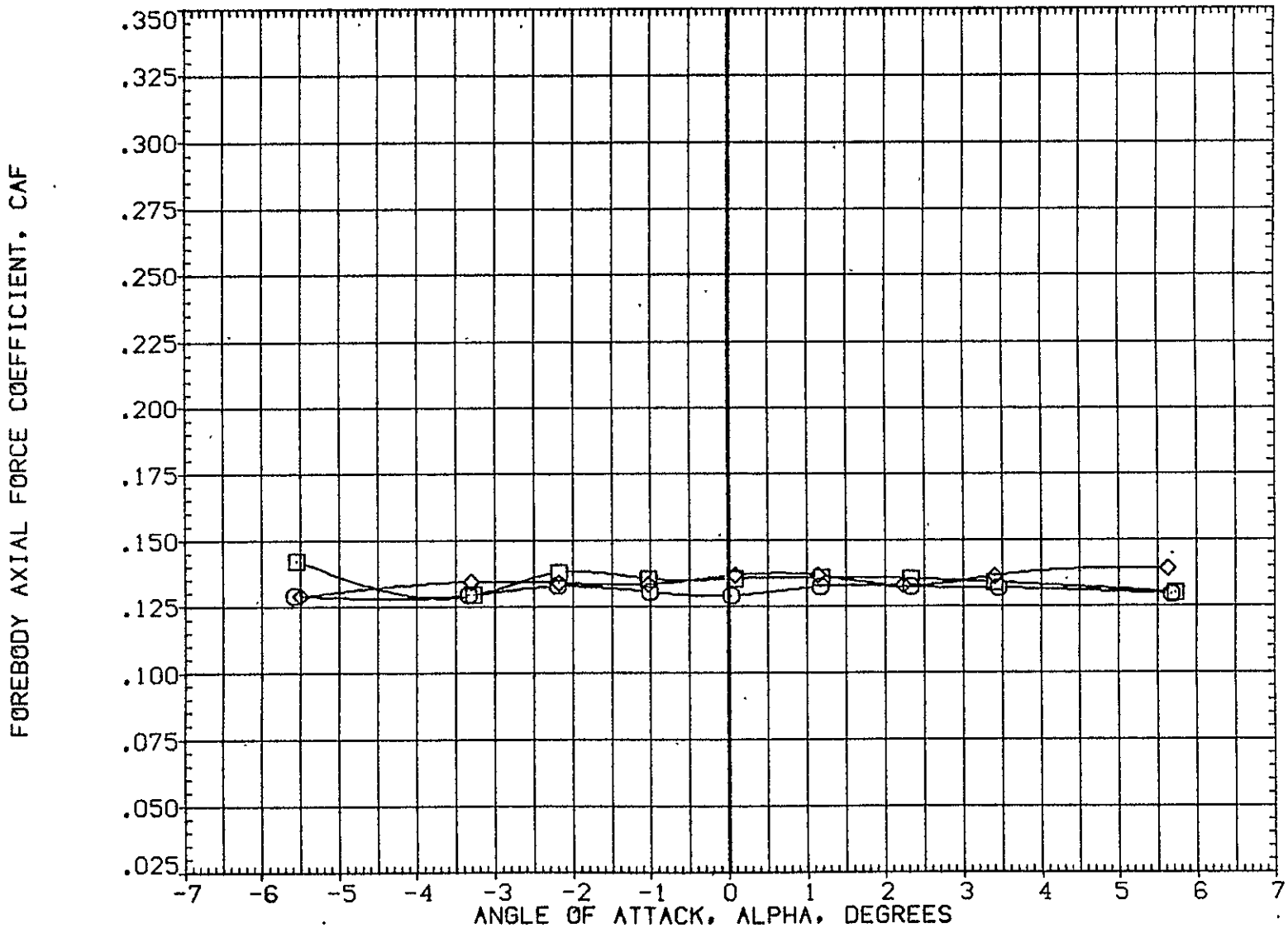


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

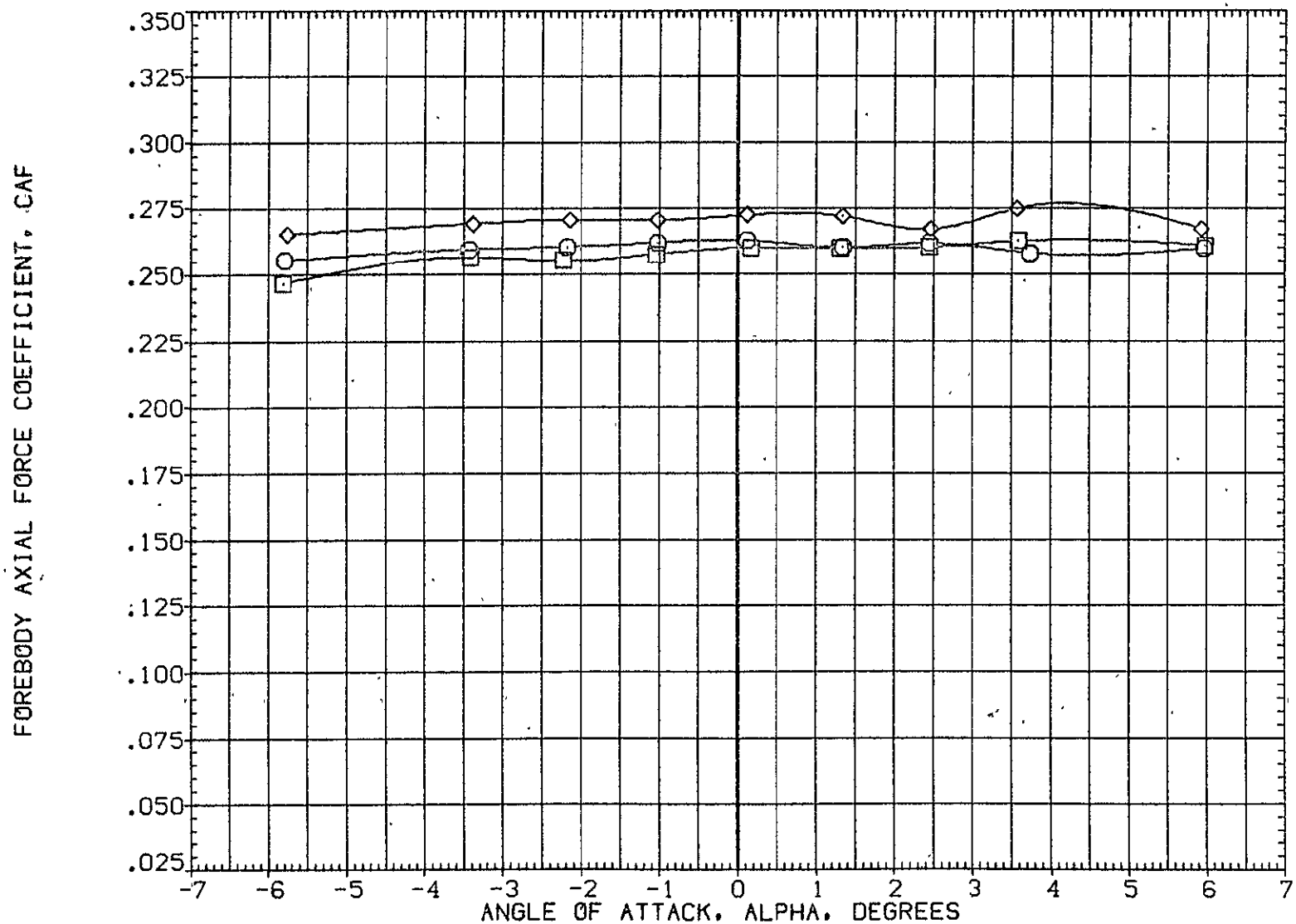


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	○	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	□	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

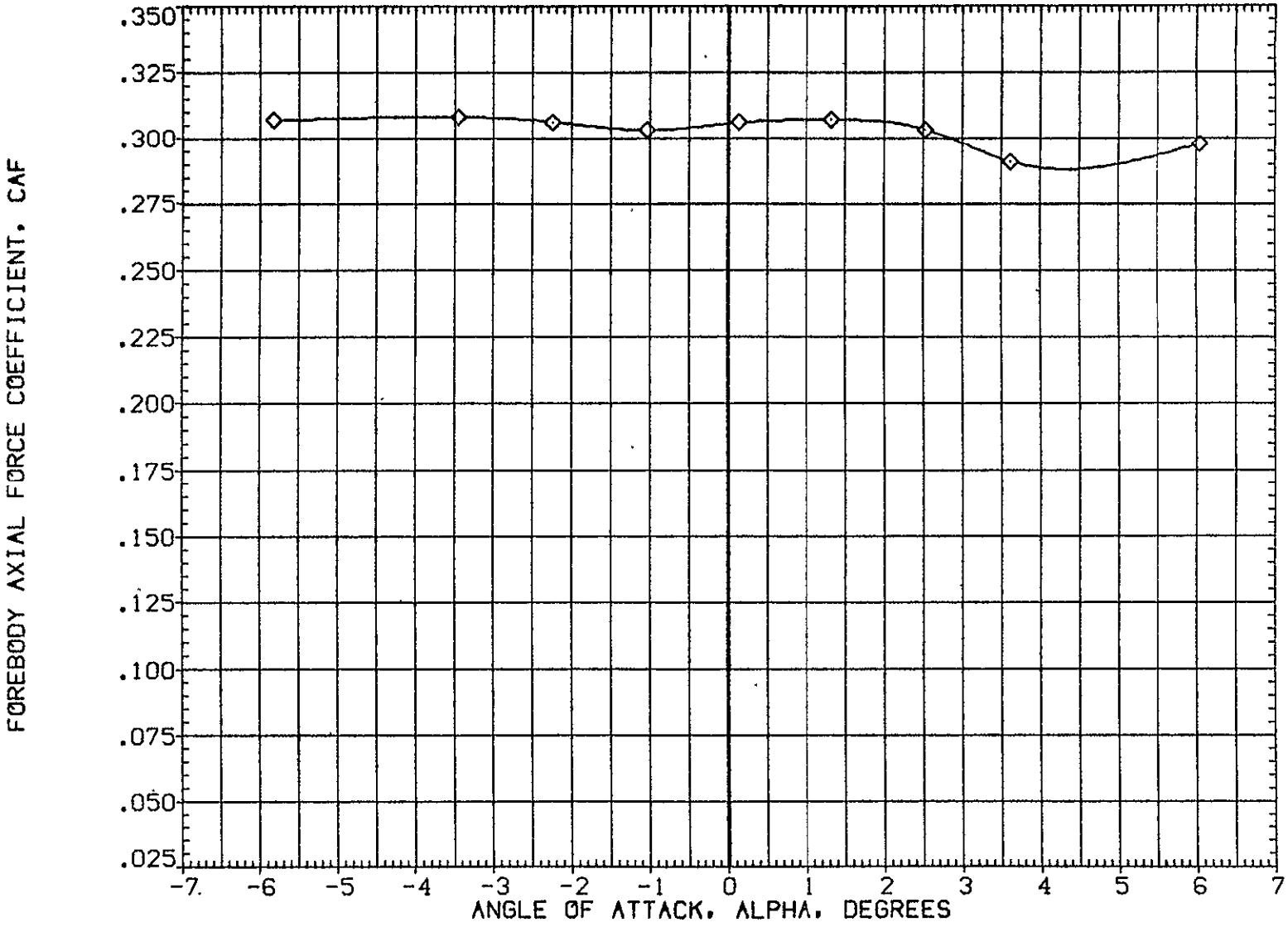


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO37)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO38)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO39)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

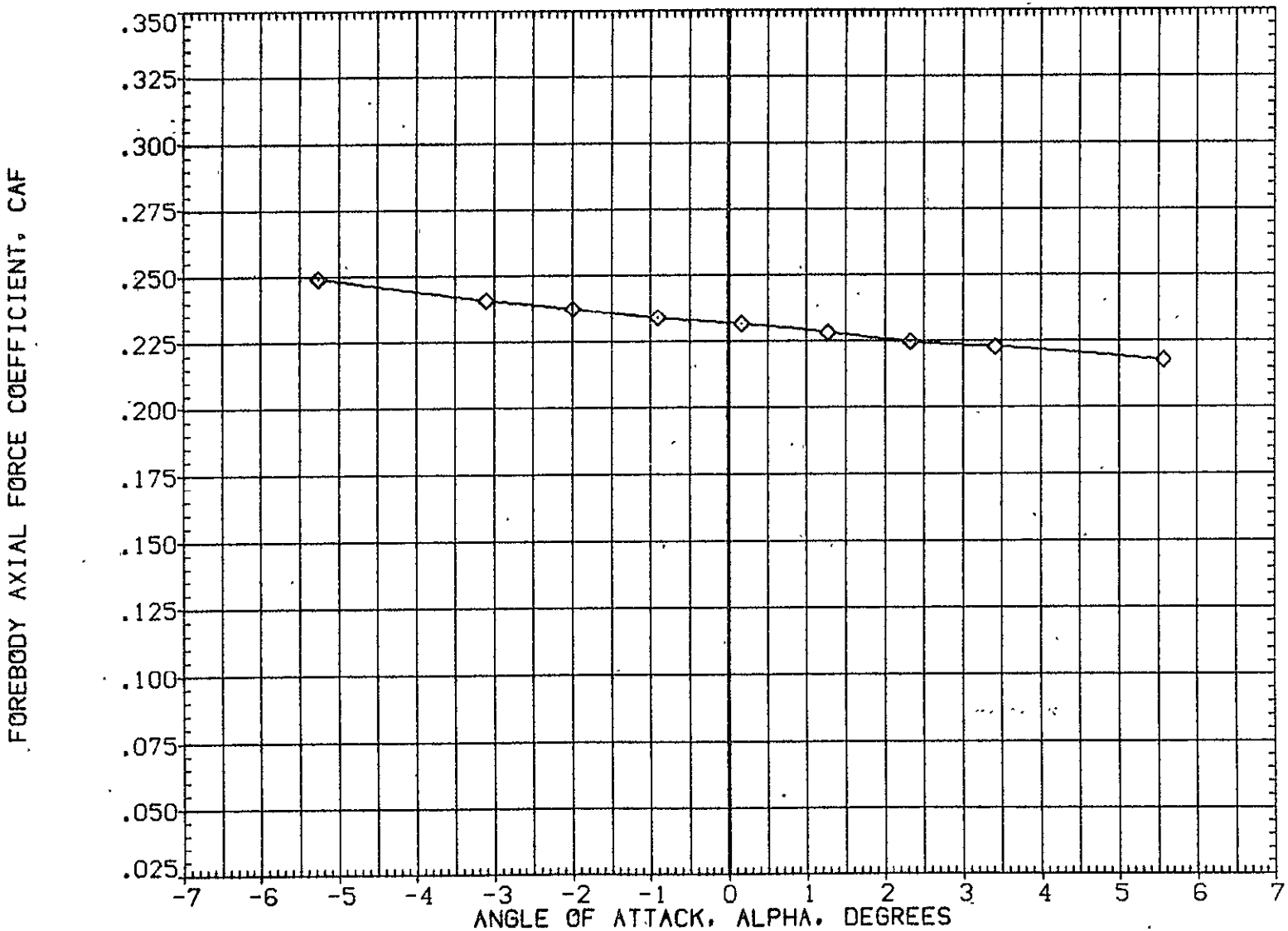


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.97

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L038)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L039)	◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

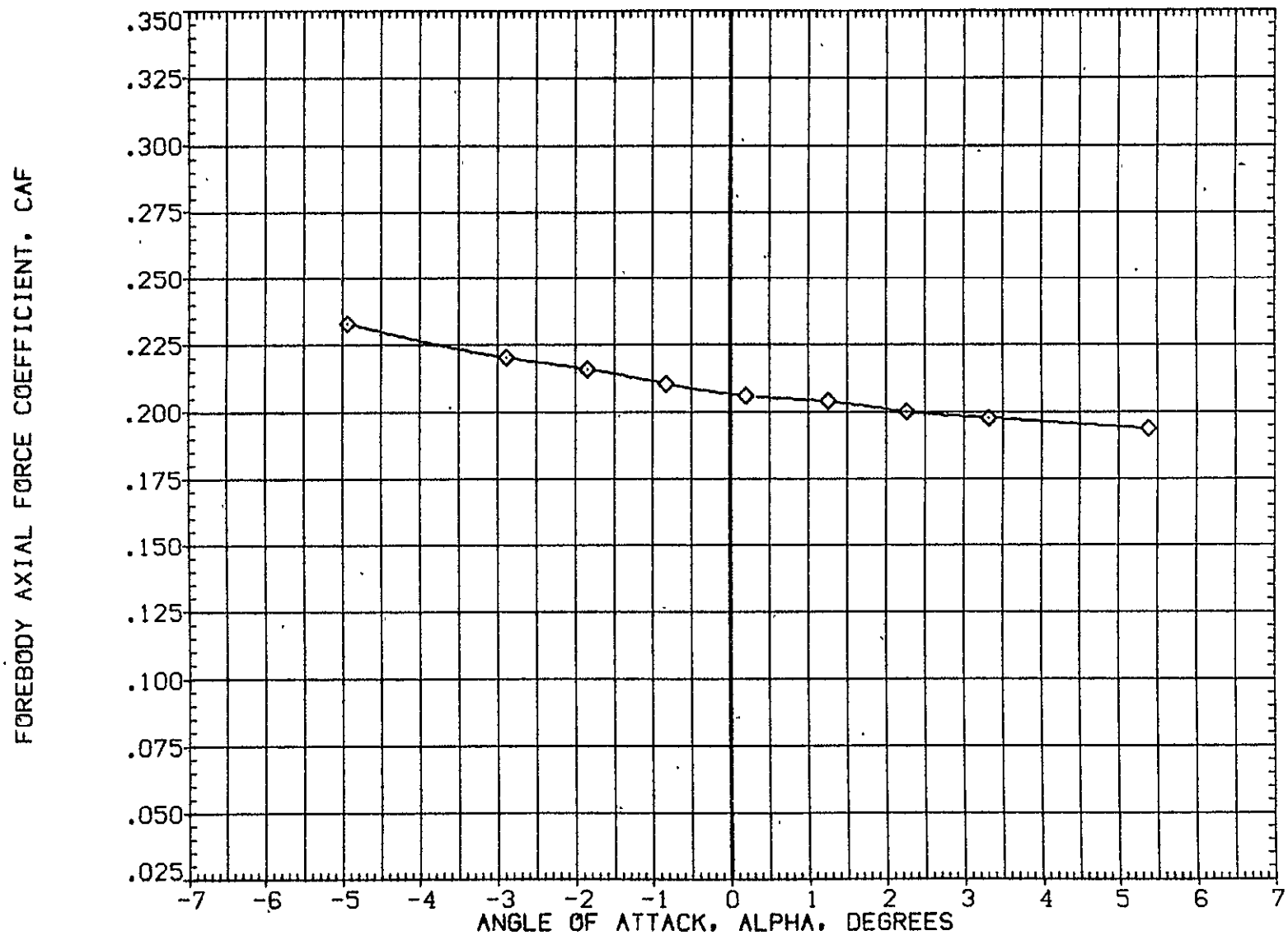


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L037)	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L038)	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L039) ◇	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

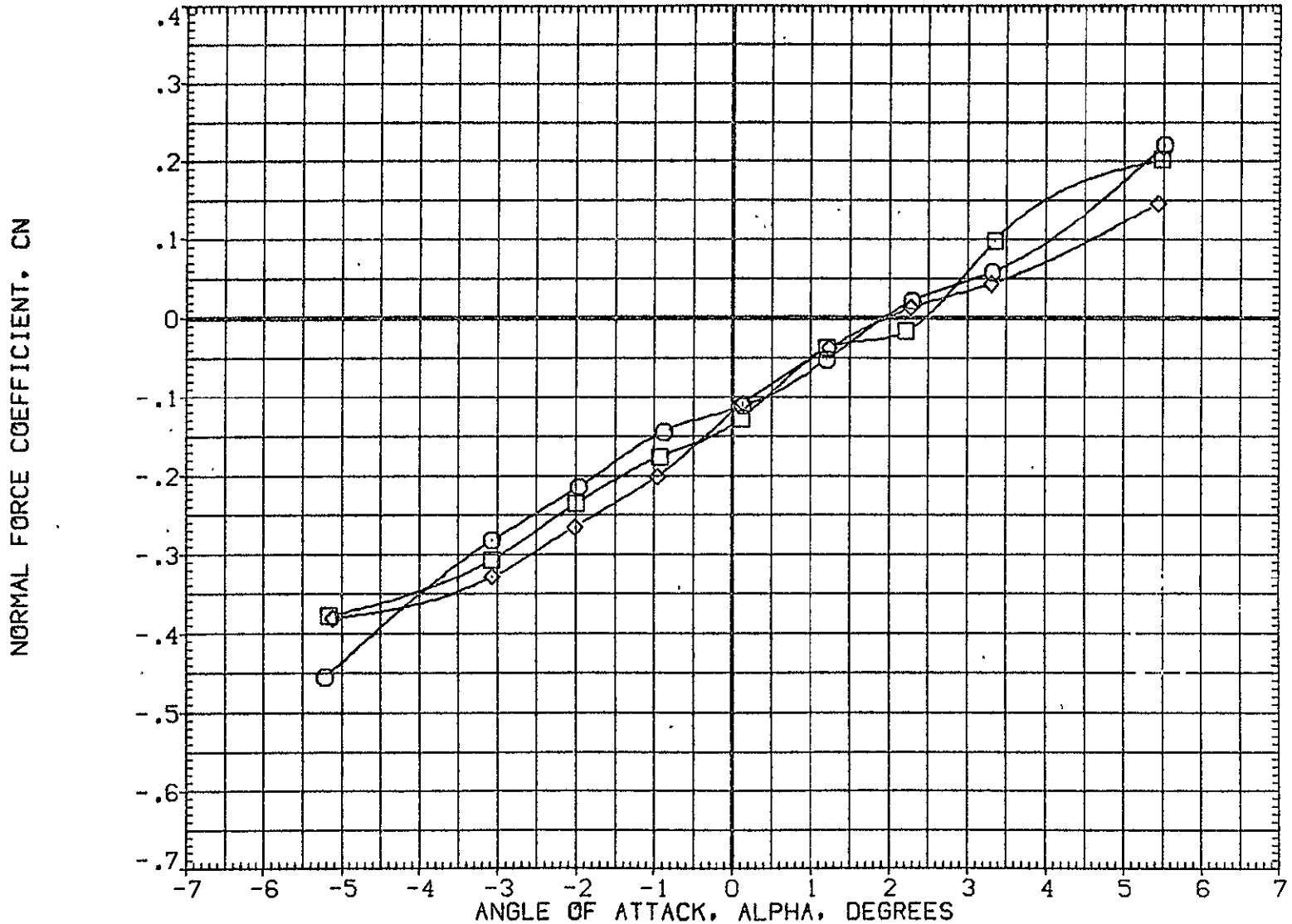


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

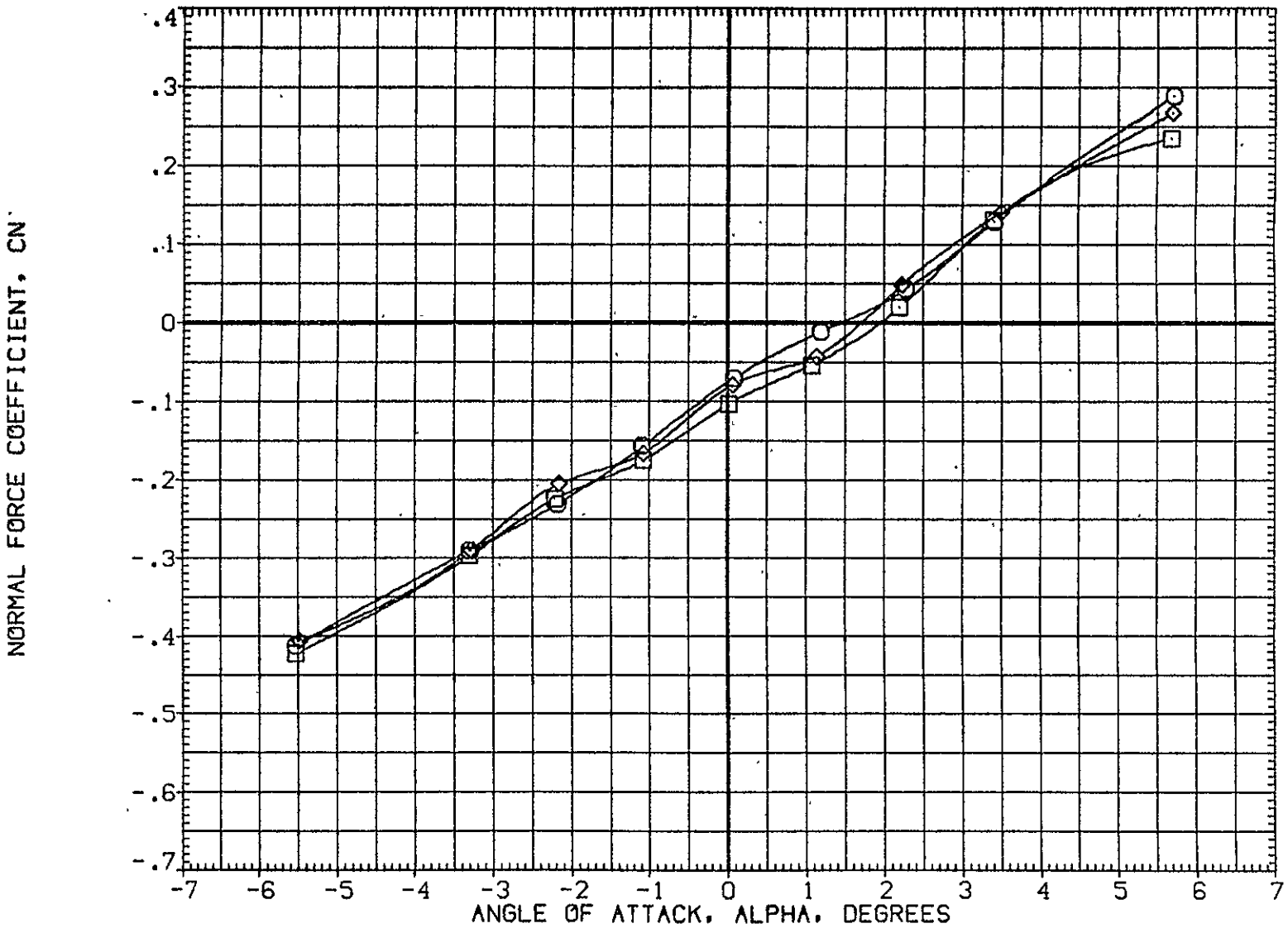


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .61

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)_	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

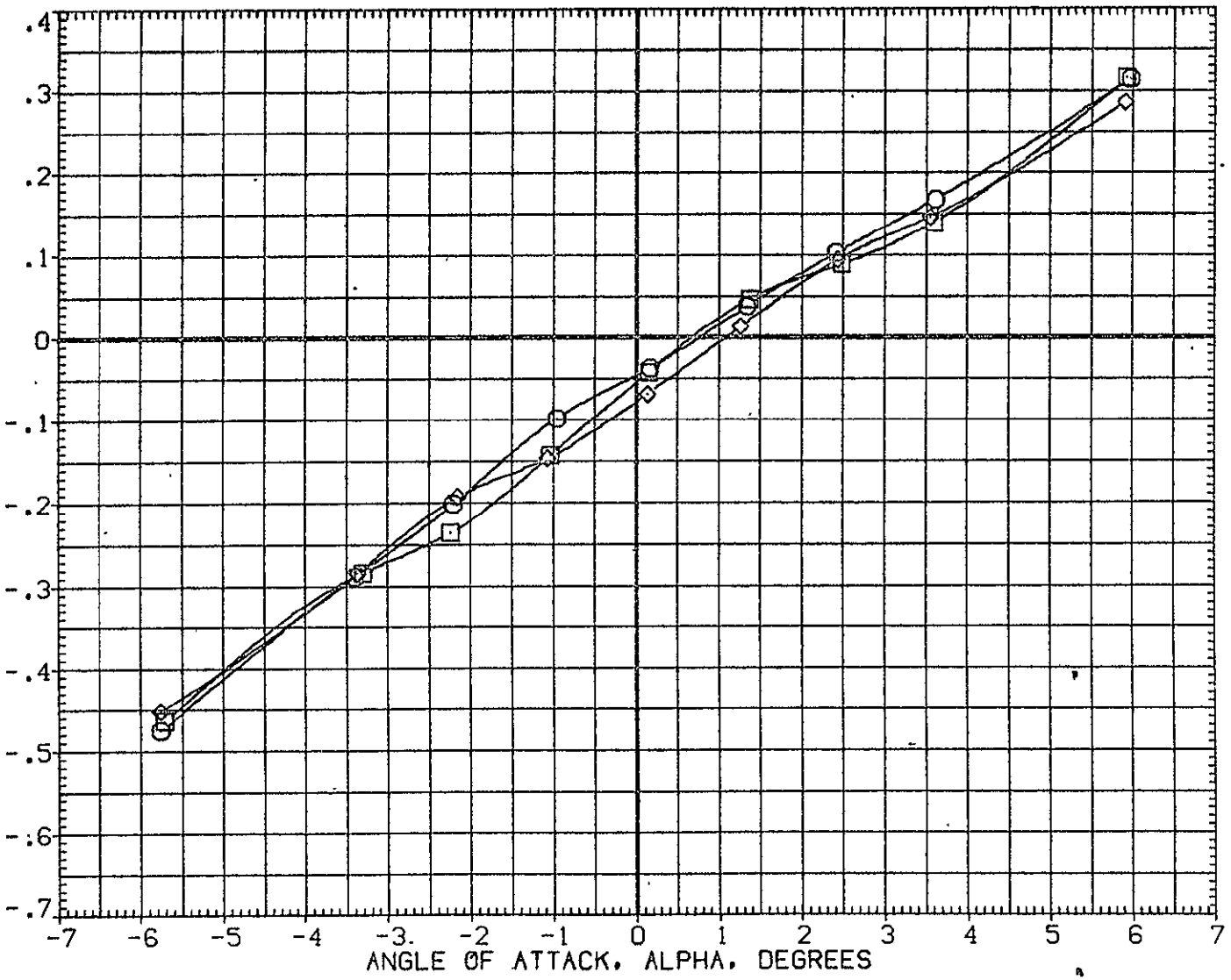


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .91

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO40)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1LO41)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1LO42)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

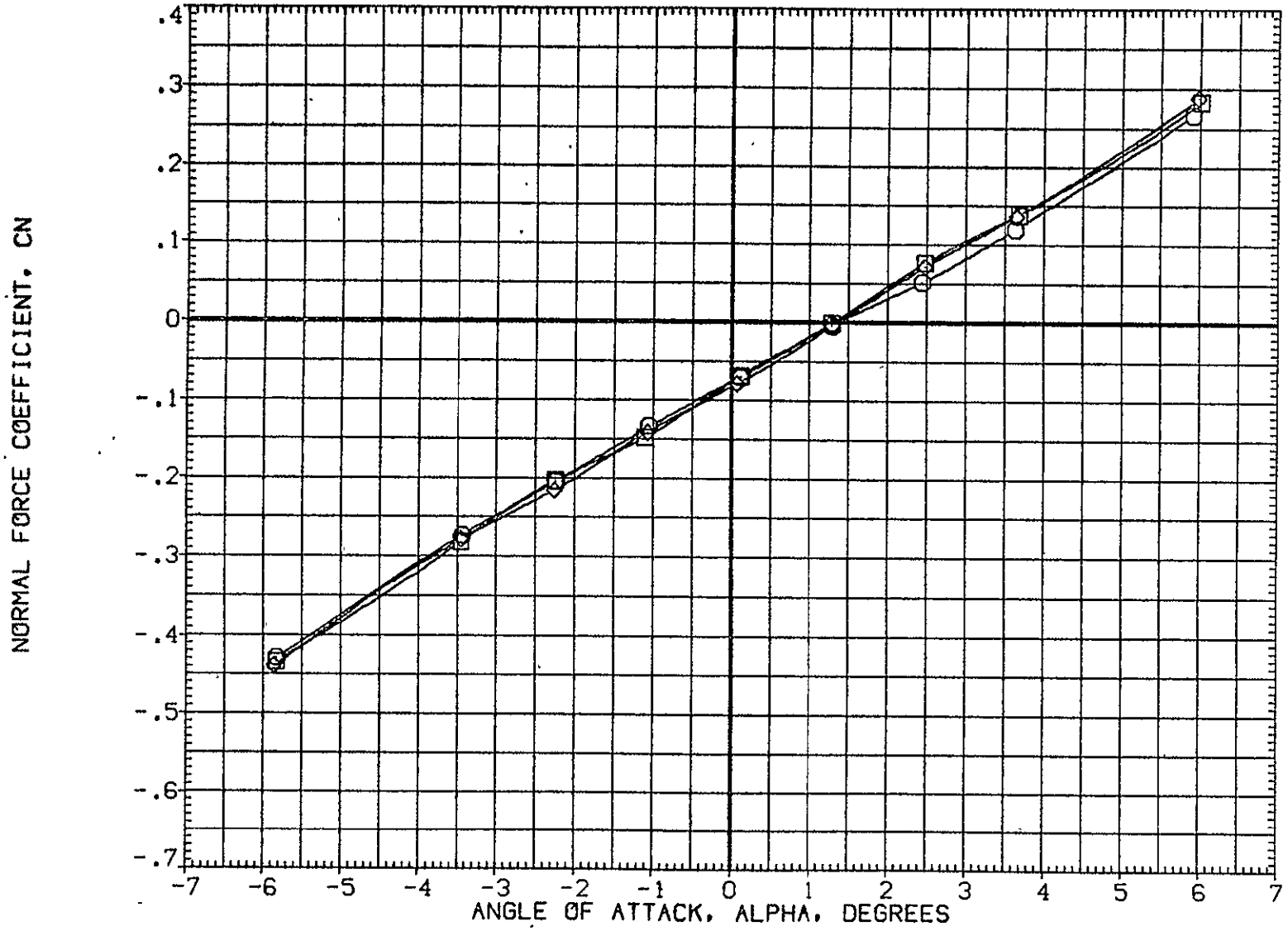


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)		MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)		MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)		MSFC TWT 600 (FA14)	02T1S1A3R2K1F1B	.000	.000	90.000	.140

REFERENCE INFORMATION.		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
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SCALE	.0040	

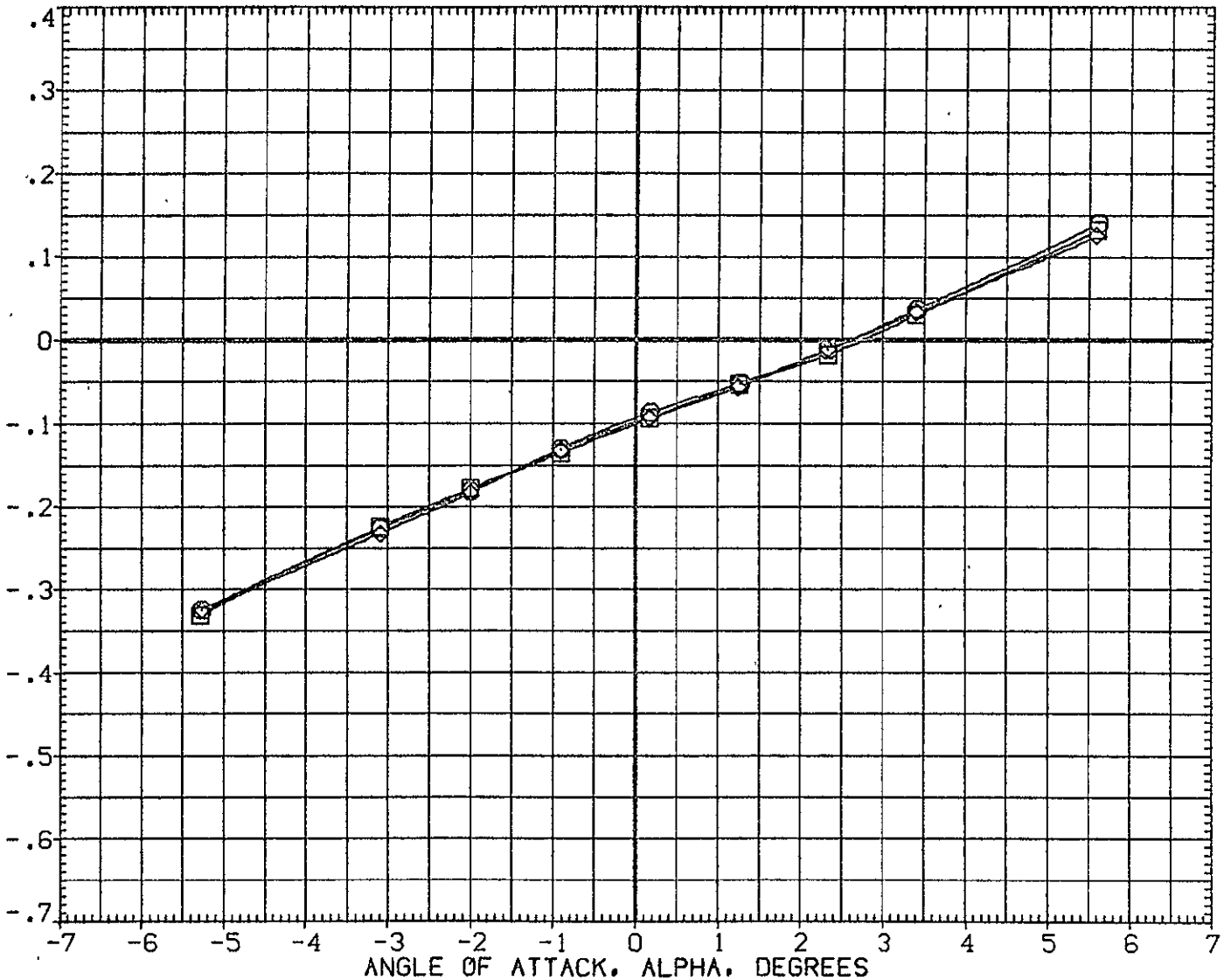


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO40)	□	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(AILO41)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(AILO42)	◁	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

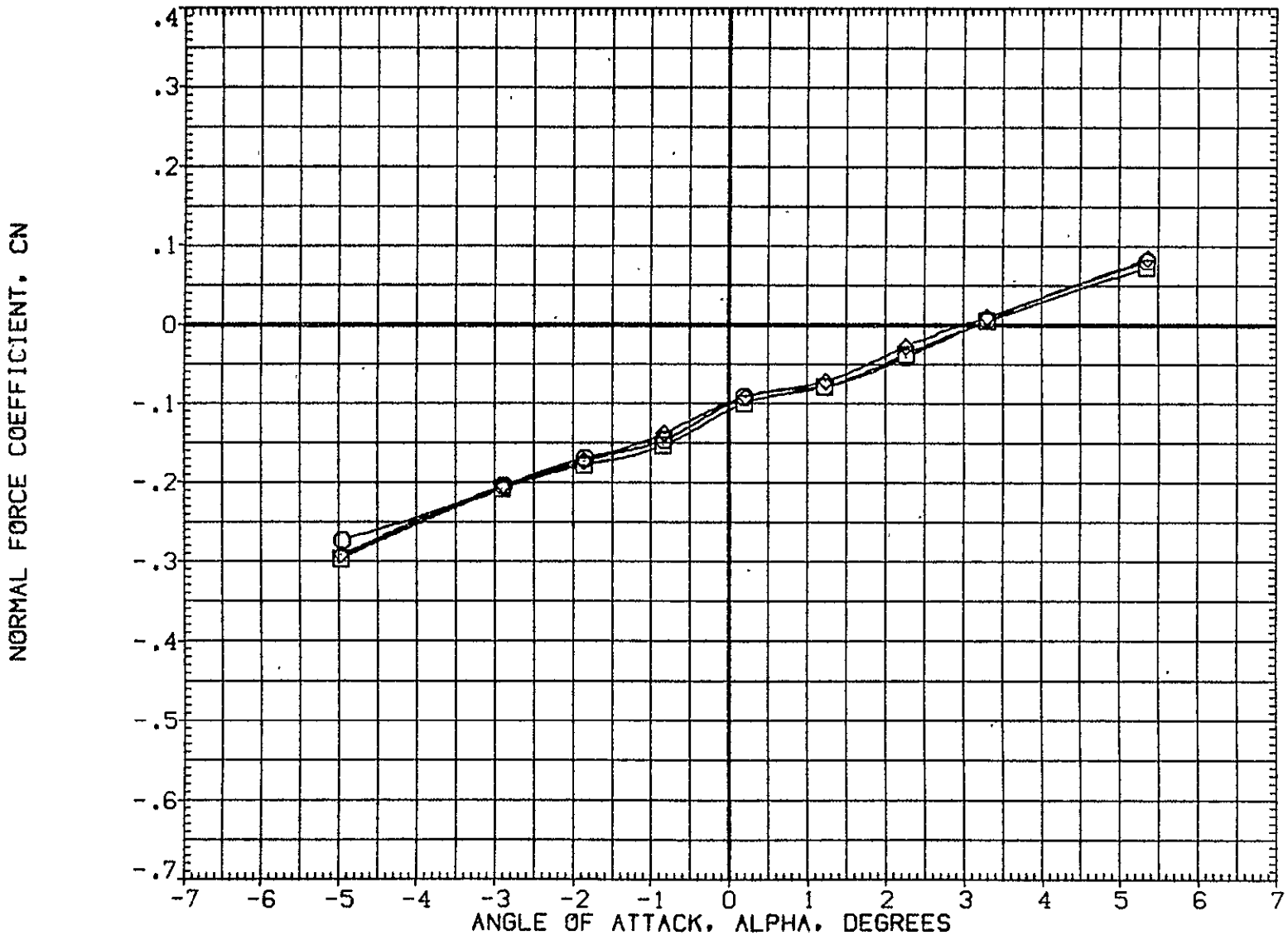


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO40)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1LO41)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1LO42)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

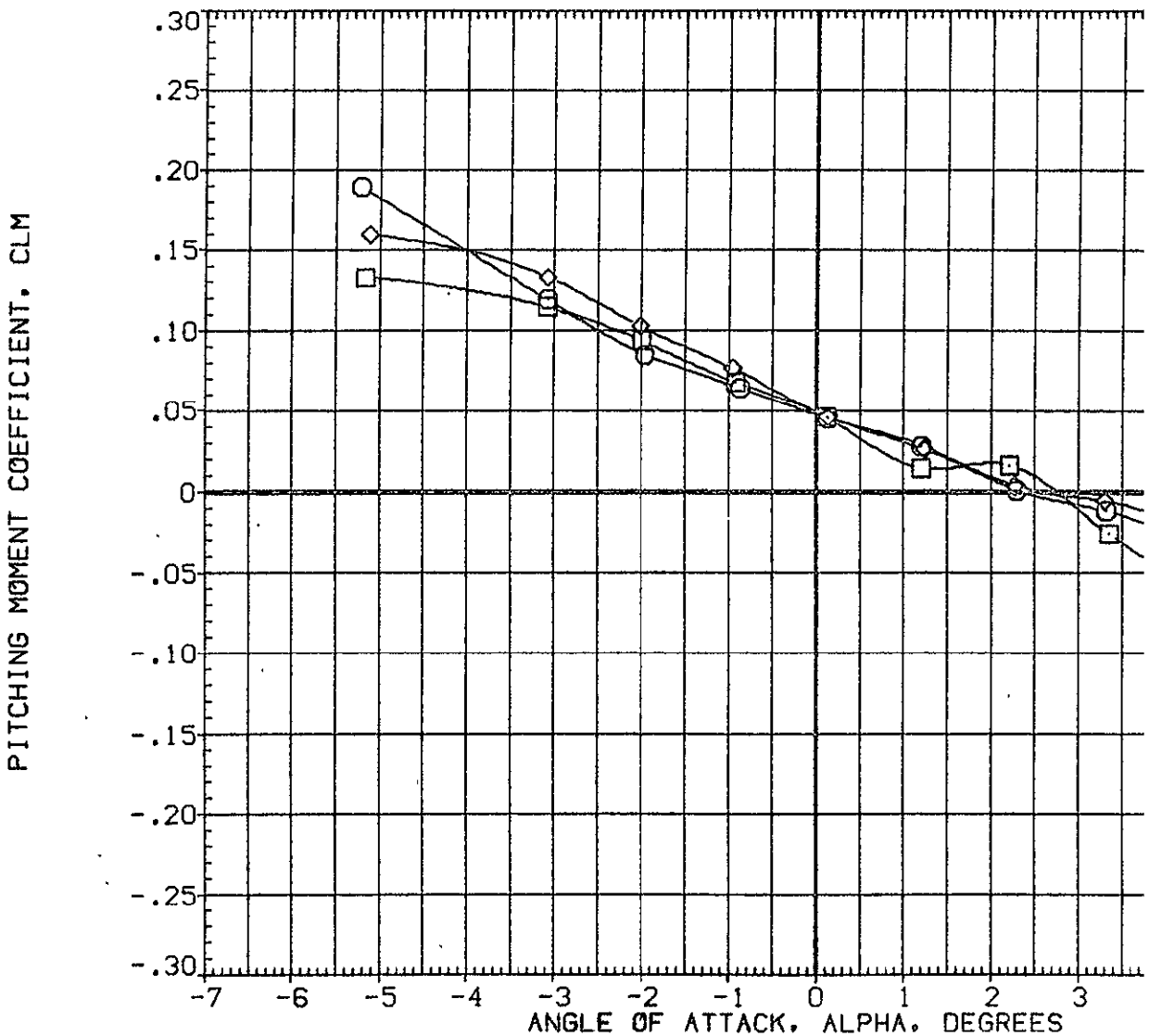
REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.14
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.14
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.14

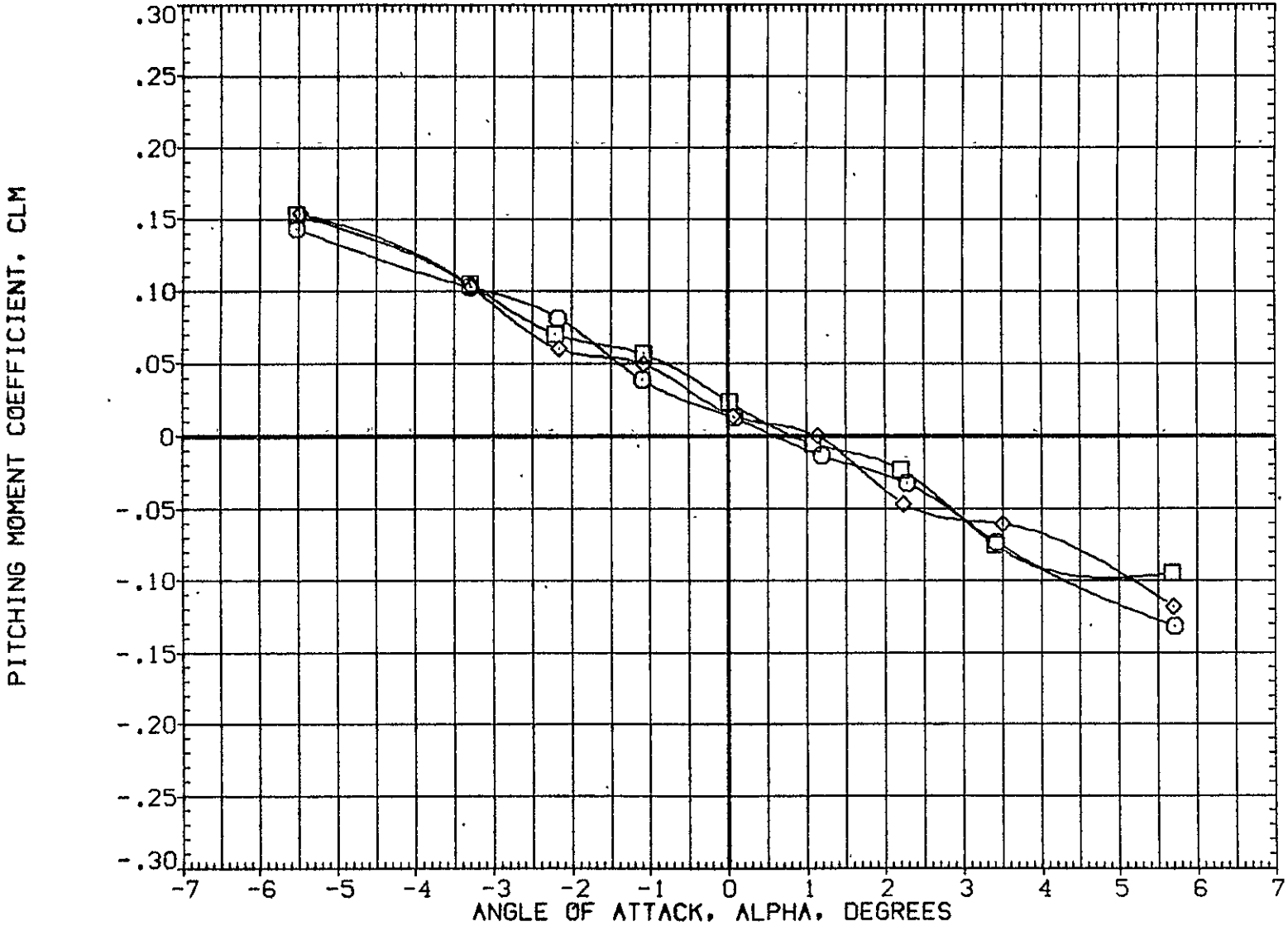


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE

(A)MACH = .61

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	□	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	○	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

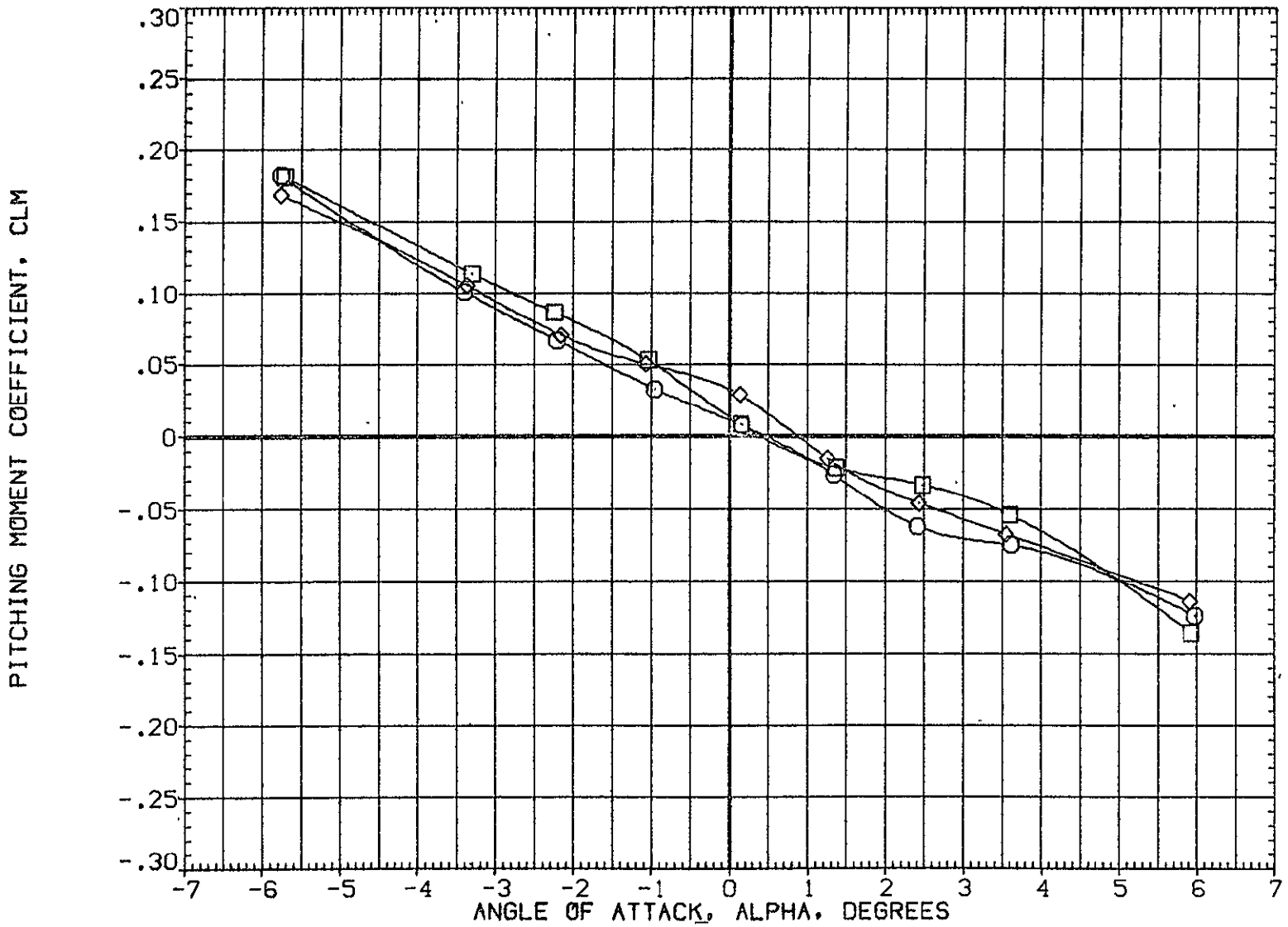


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .91

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	□	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	◁□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

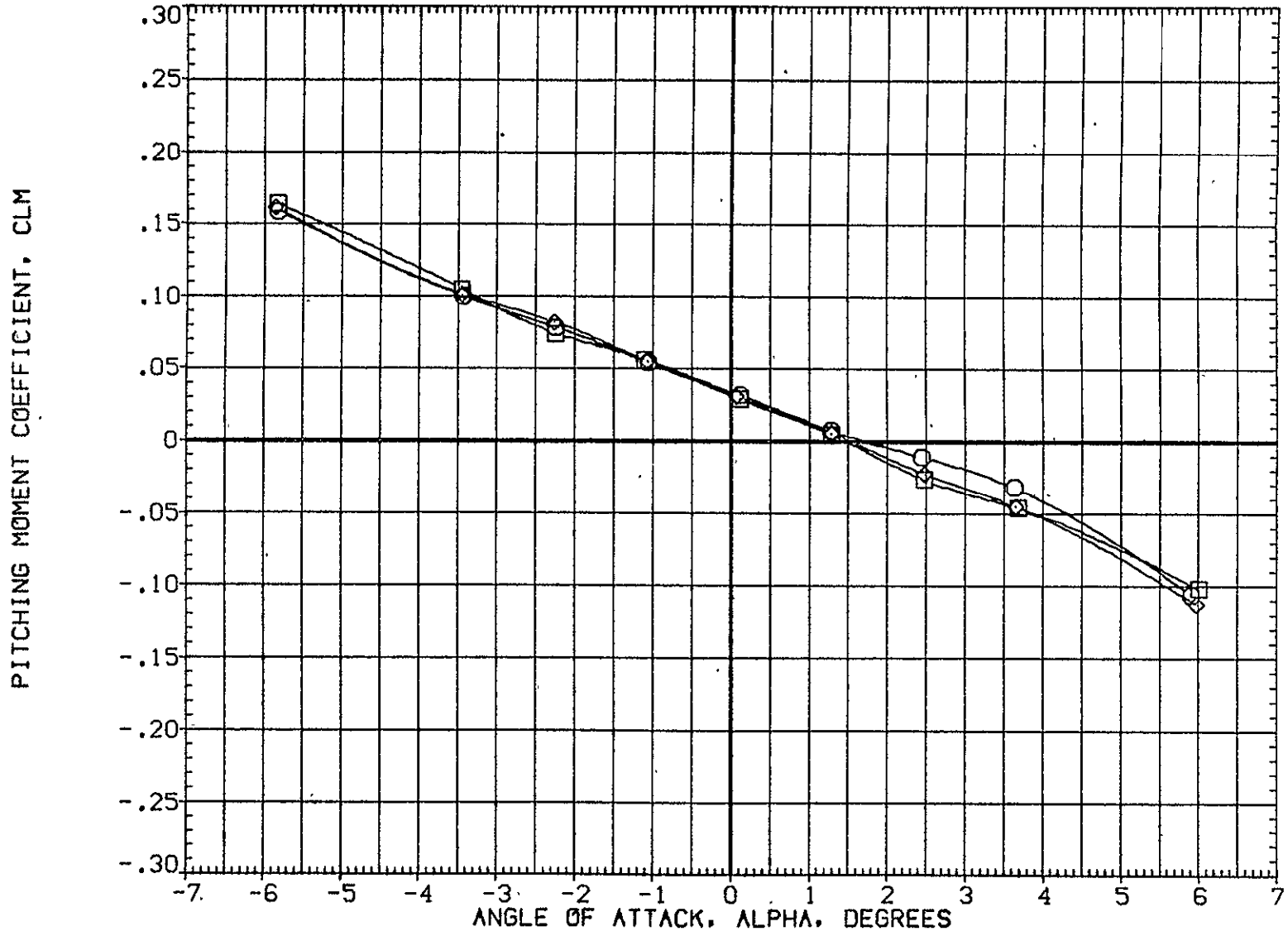


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO40)	○	MSFC TWT 600 (FA14)	02TISIA3R1K1	.000	.000	90.000	.140
(AILO41)	□	MSFC TWT 600 (FA14)	02TISIA3R2K1	.000	.000	90.000	.140
(AILO42)	◇	MSFC TWT 600 (FA14)	02TISIA3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

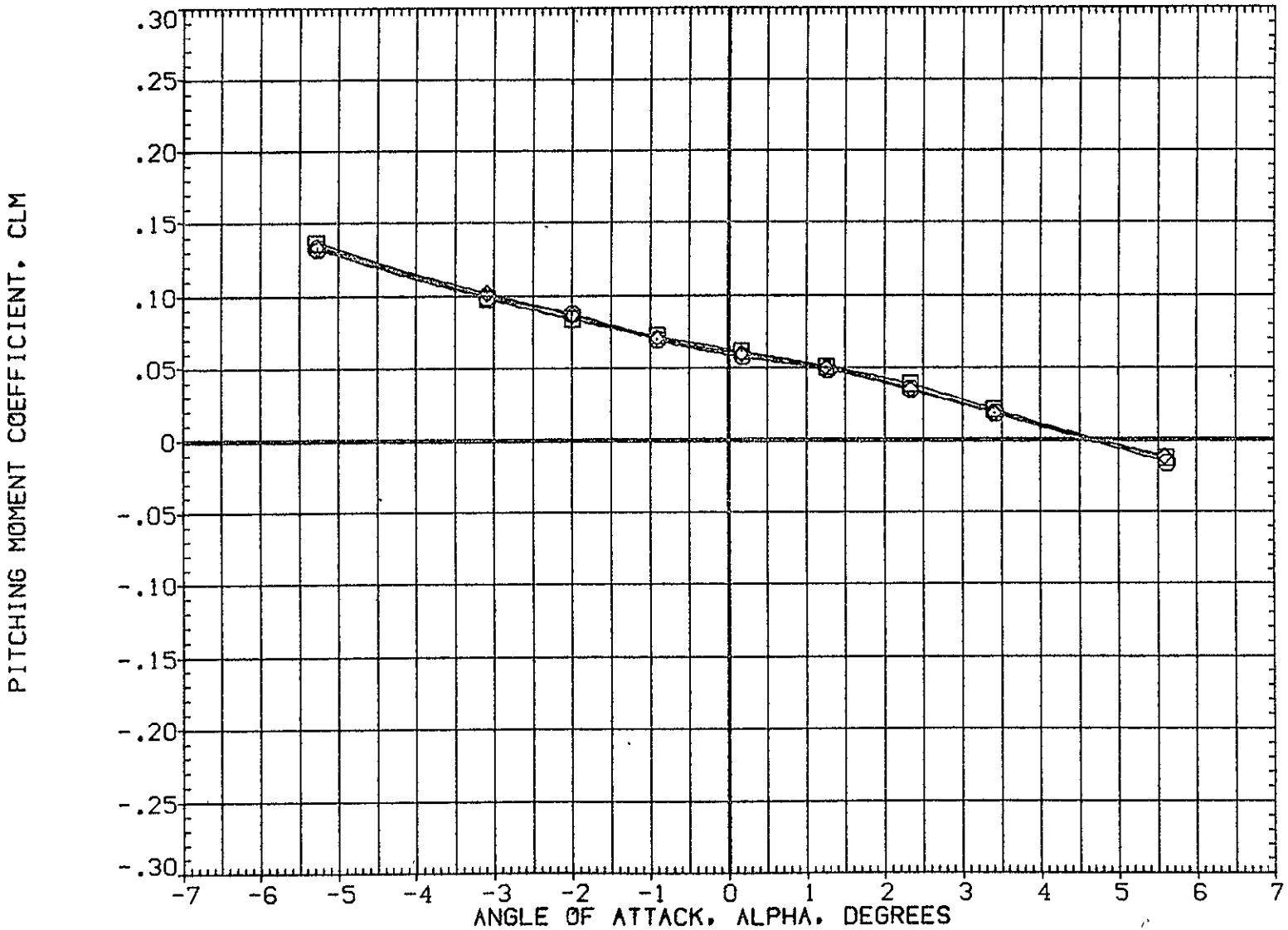


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	□	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	○	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

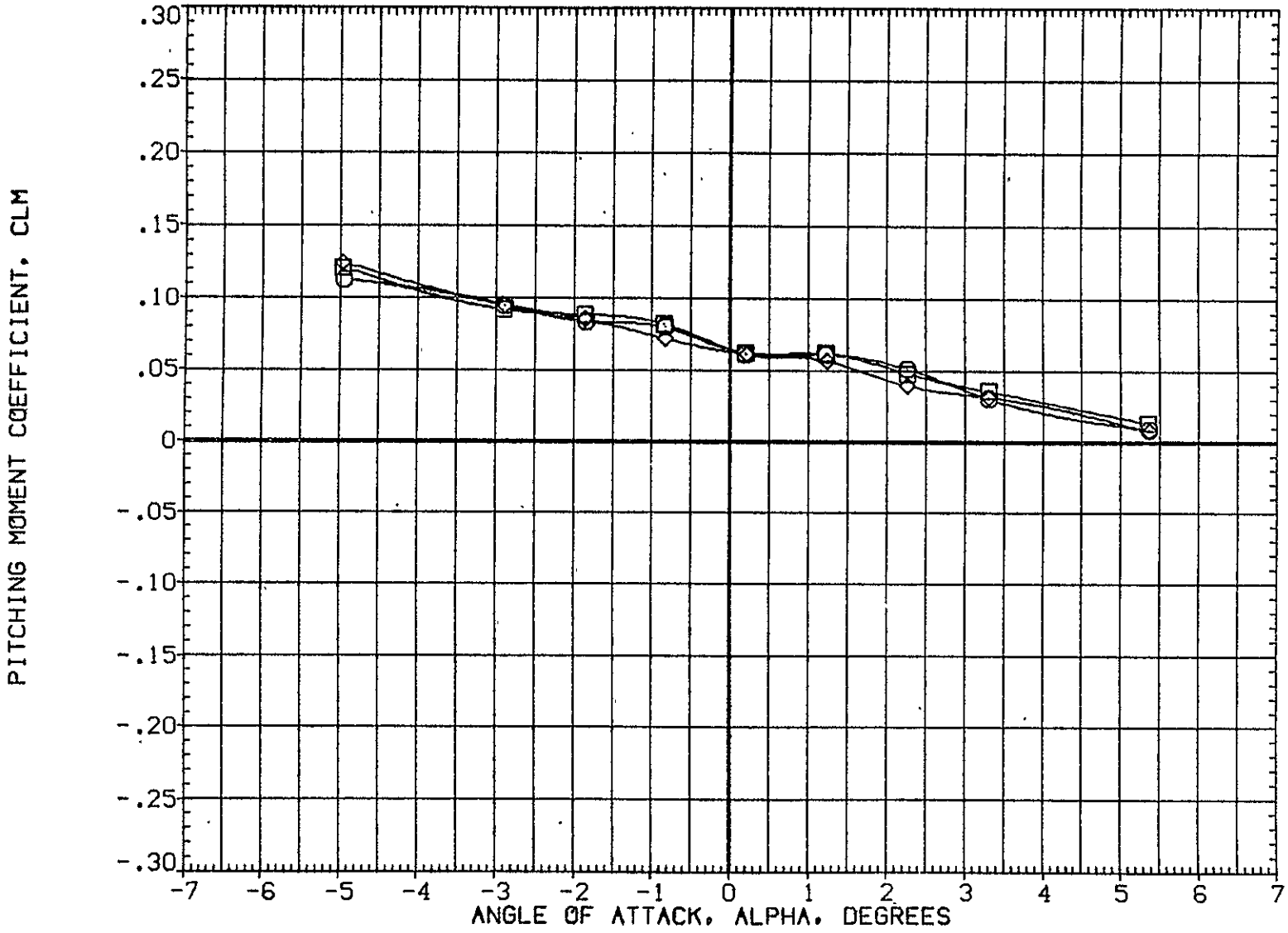


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO40)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(AILO41)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(AILO42)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

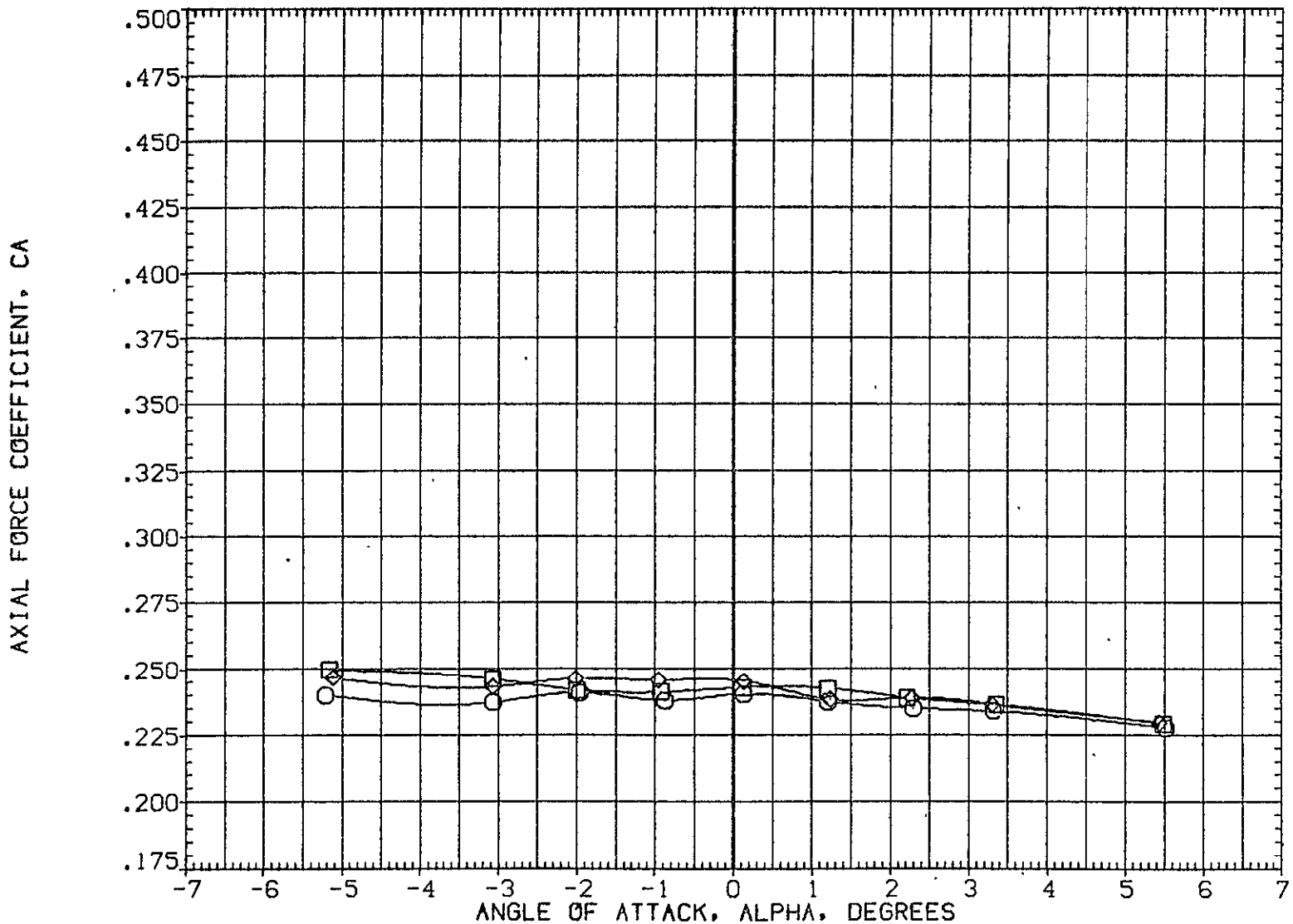


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2590.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

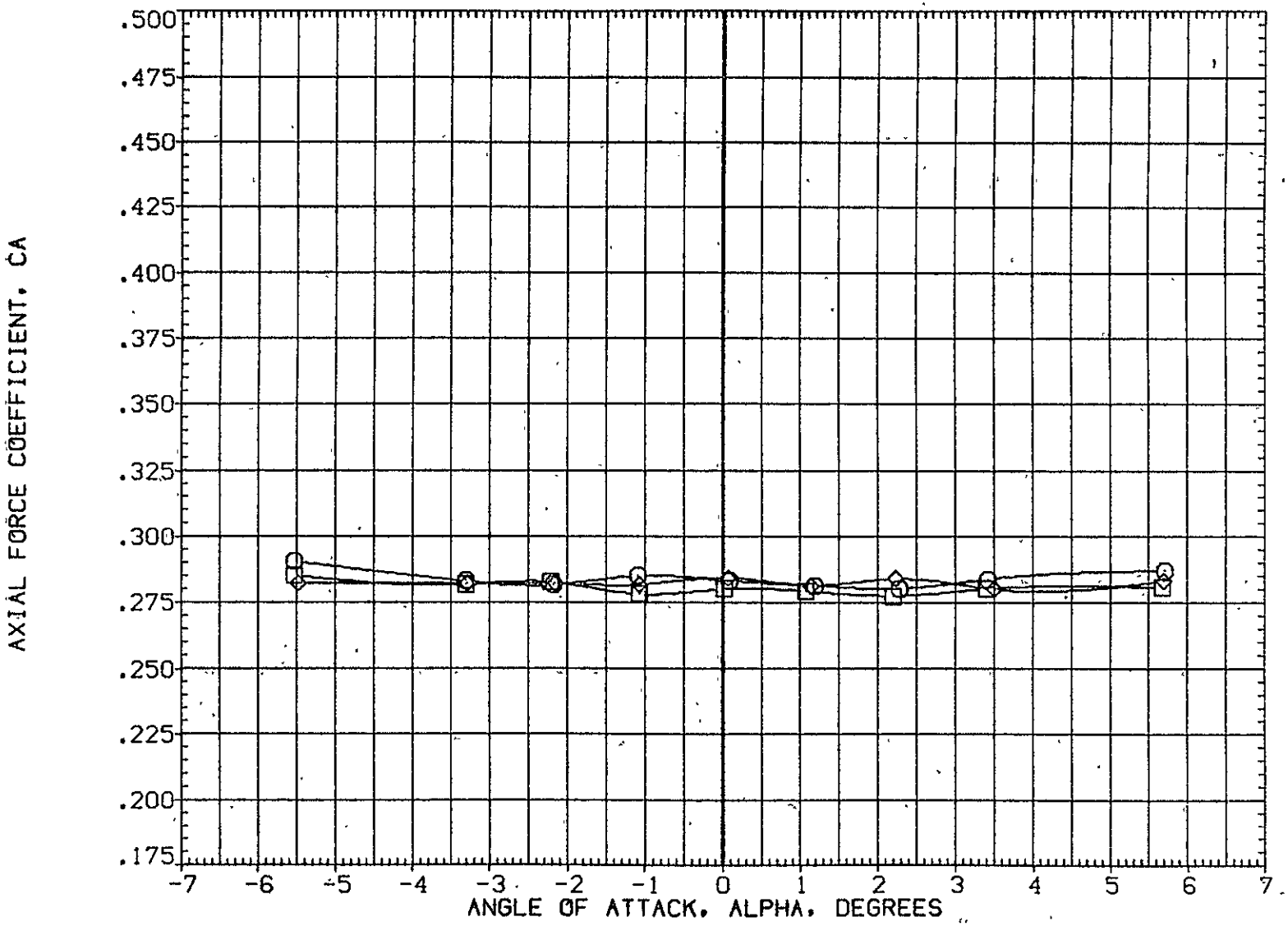


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .61

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)		MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)		MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)		MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

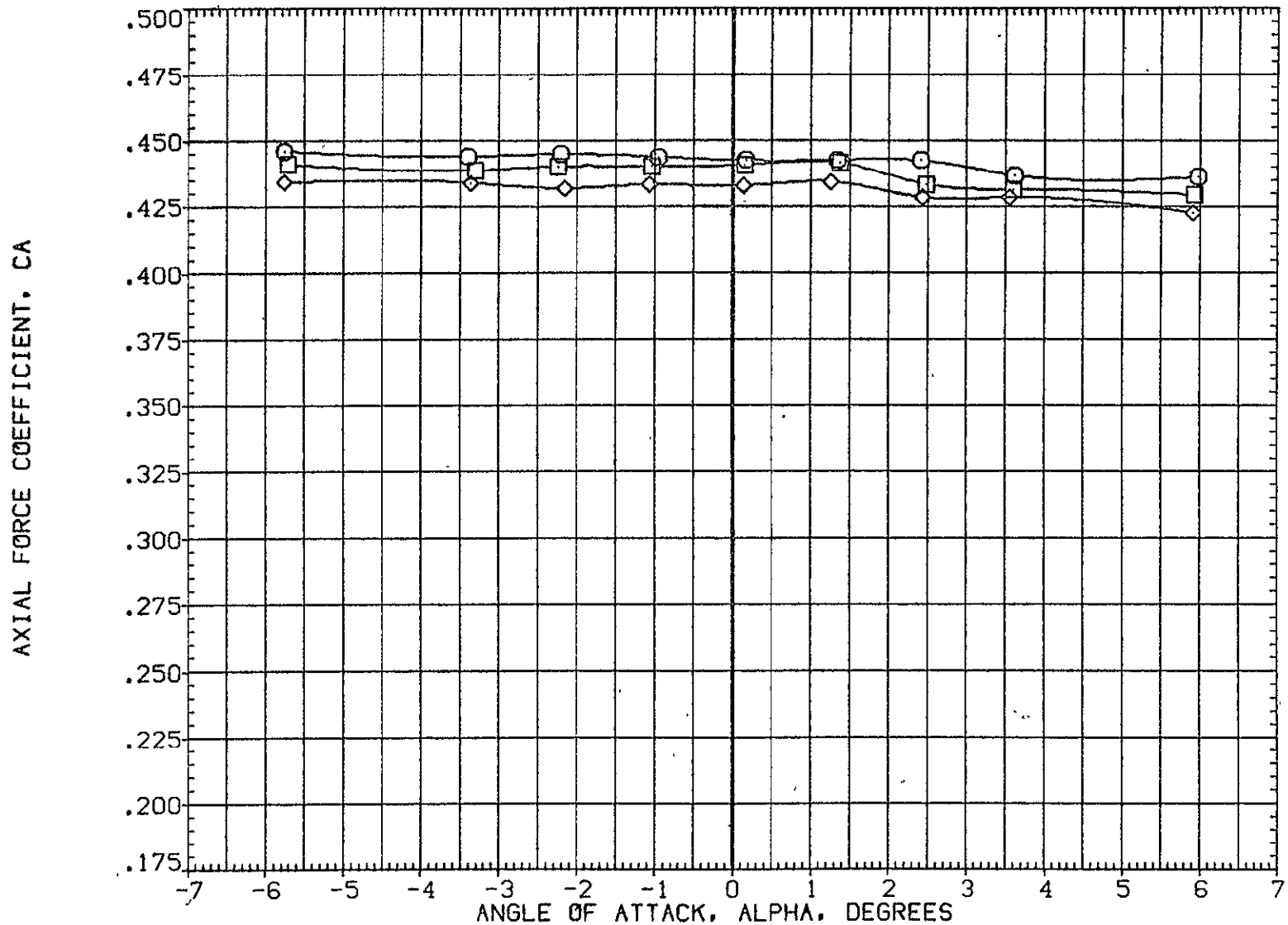


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .91

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

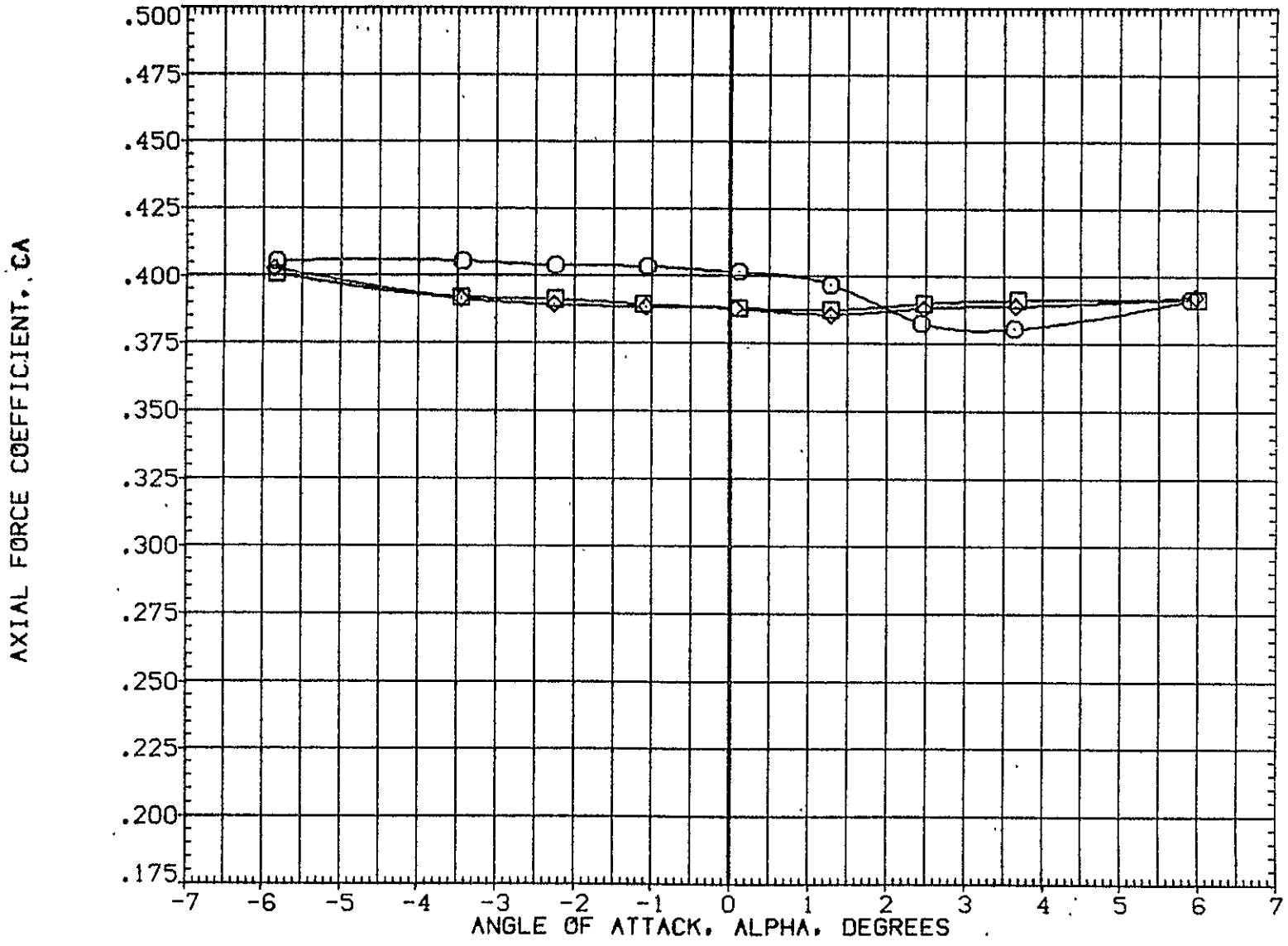


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

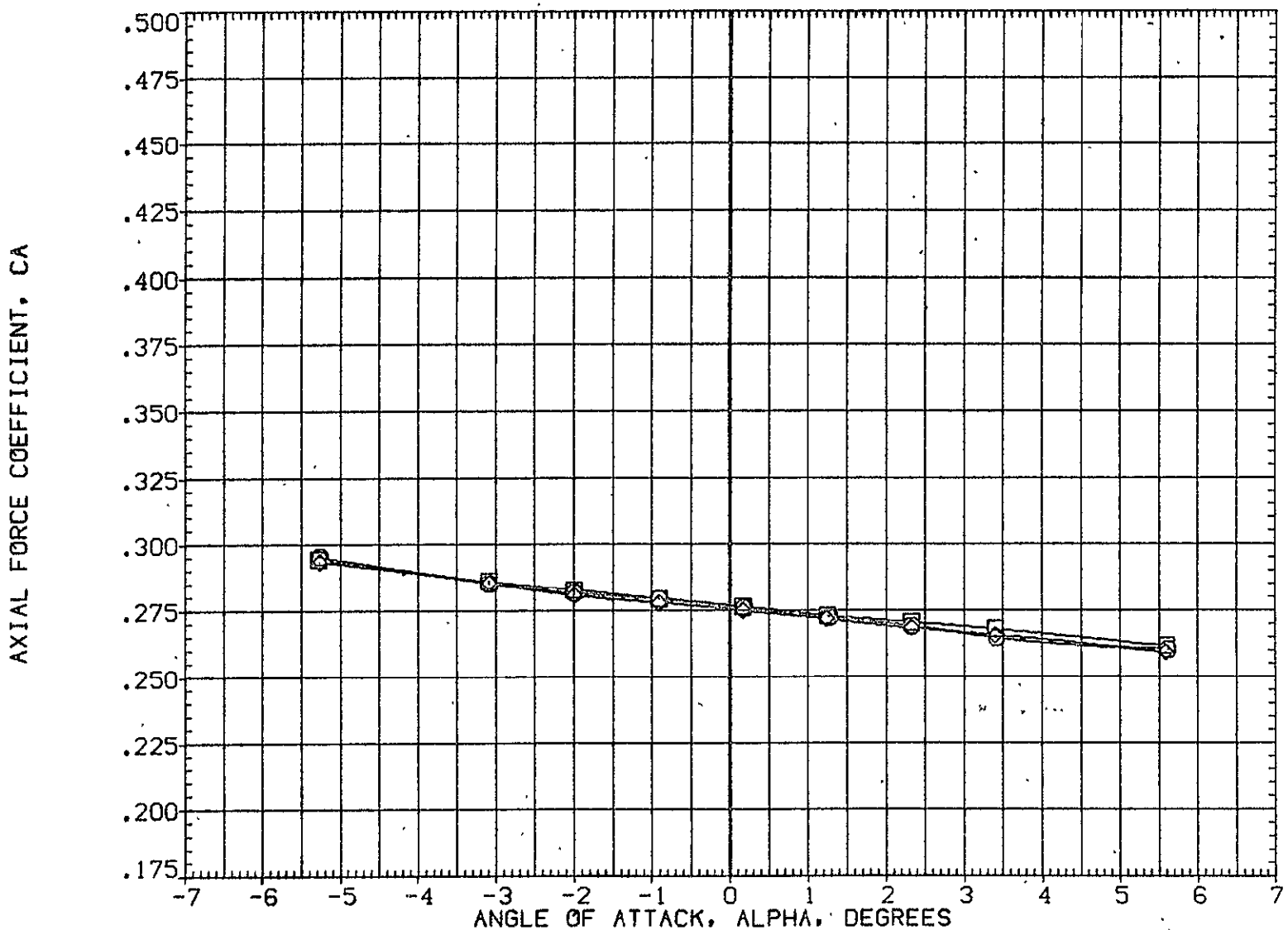


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	▢	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	▣	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

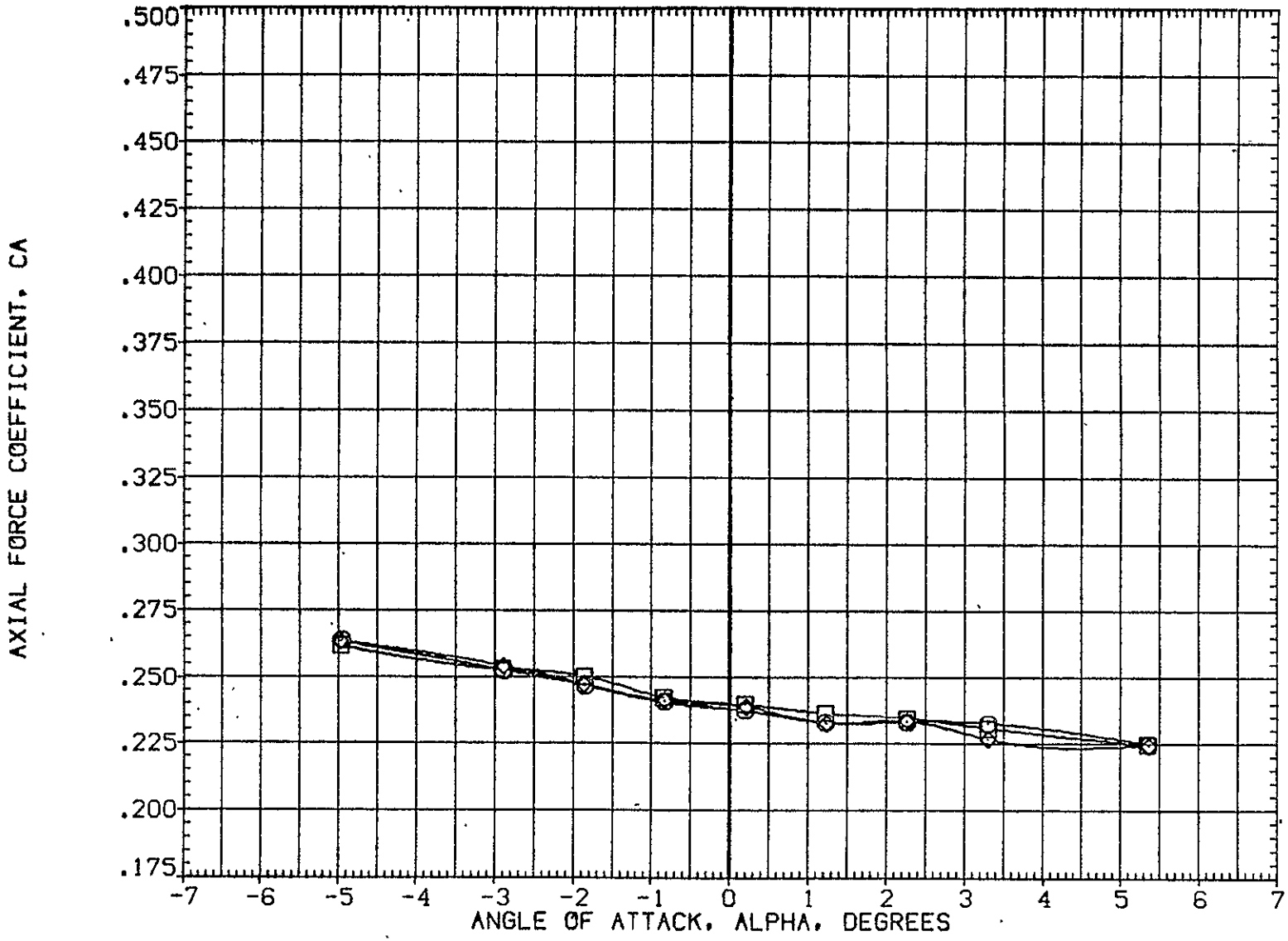


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH . = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)		MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)		MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)		MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

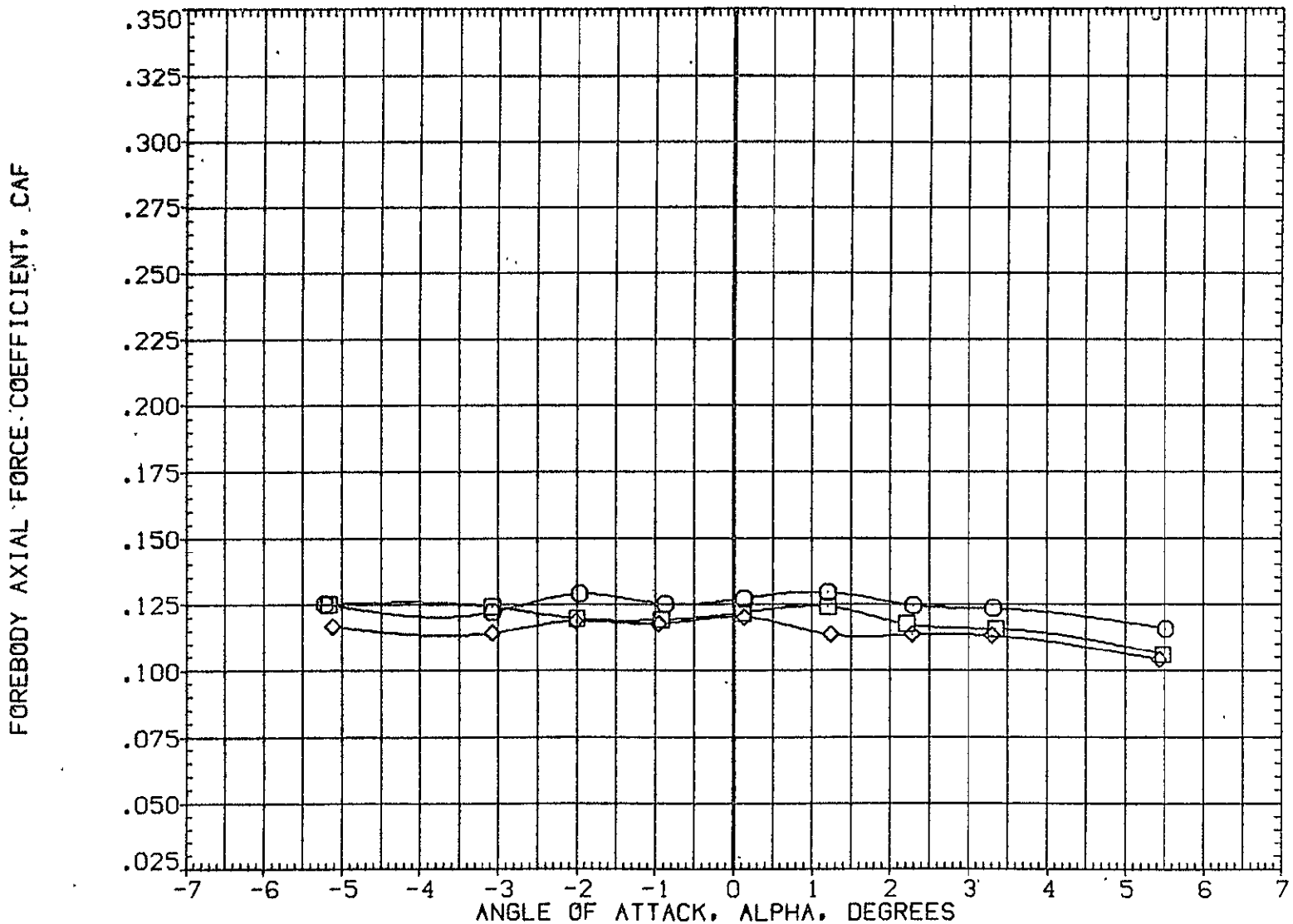


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

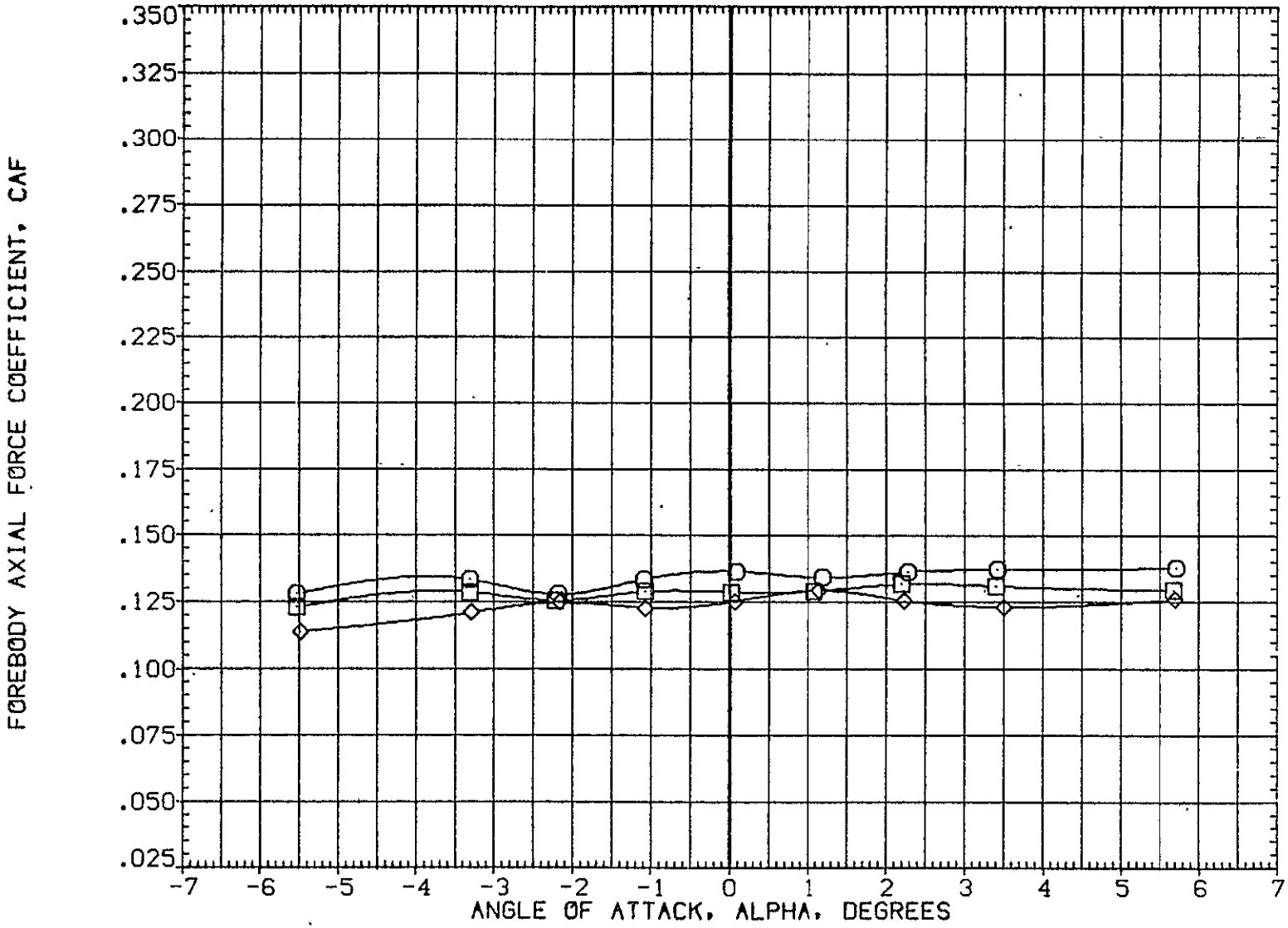


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .61

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040) ○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041) □	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042) ◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

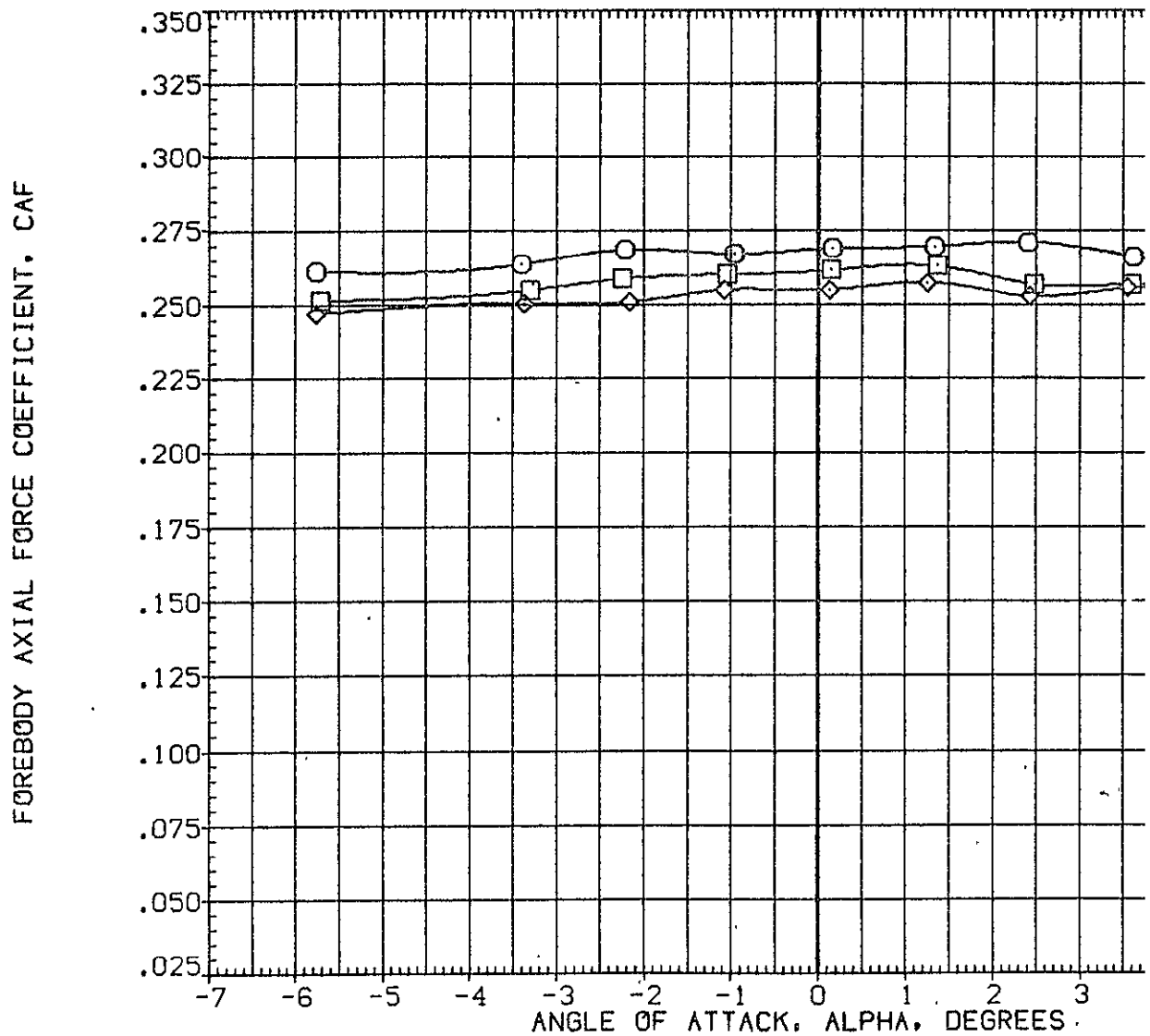
REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .91

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.14(
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.14(
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.14(

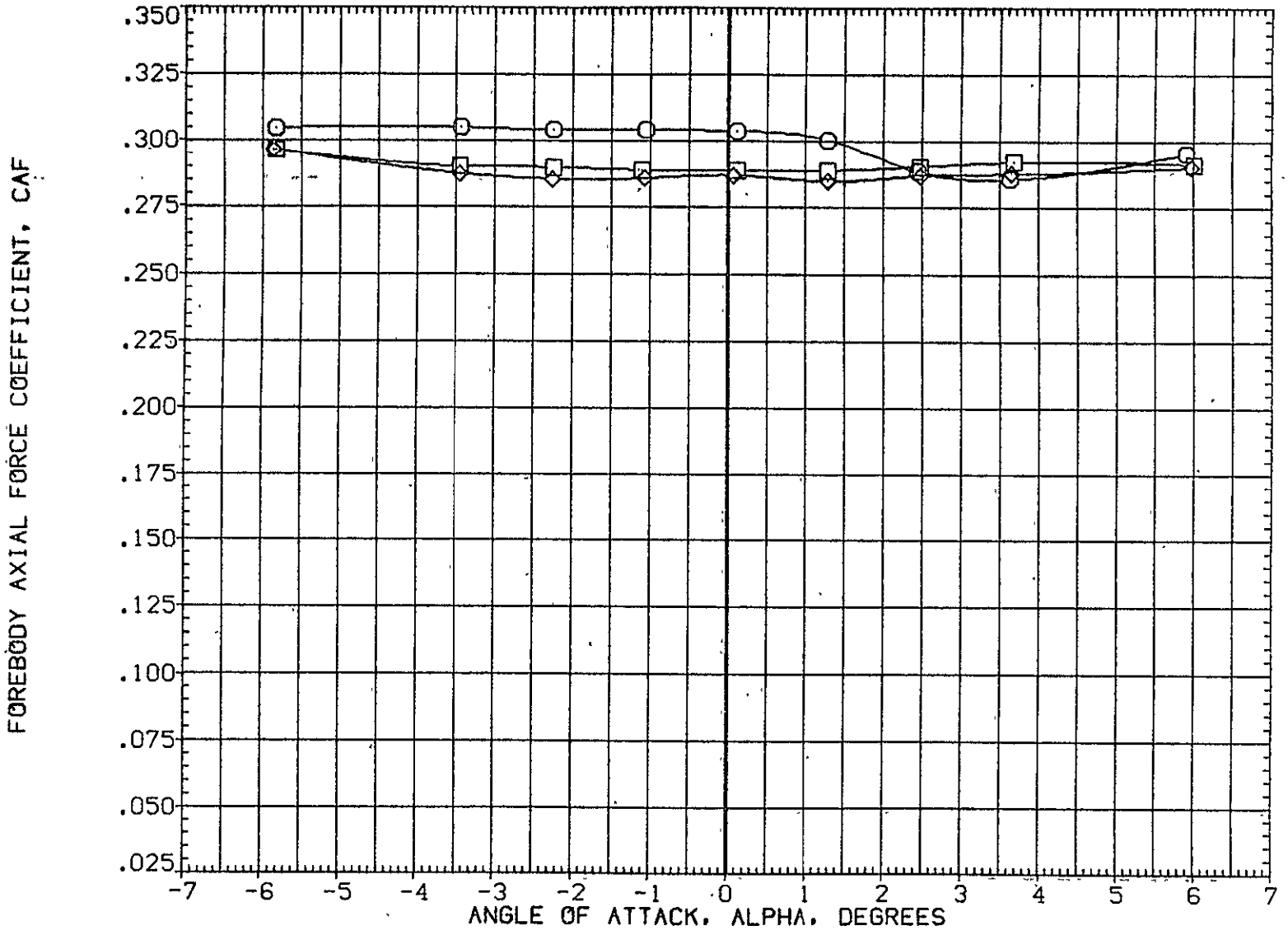


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLI

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

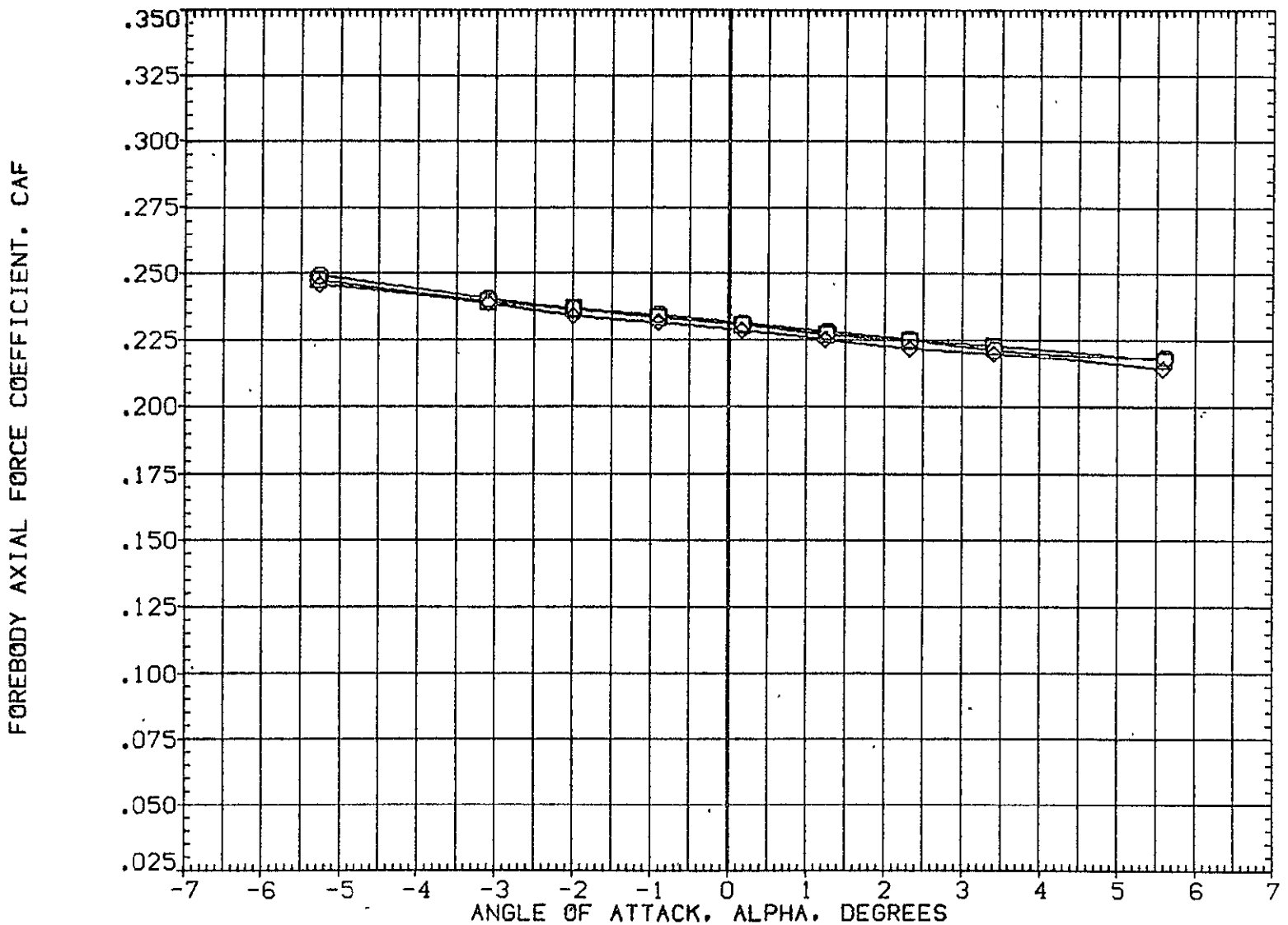


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L040)		MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)		MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(A1L042)		MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

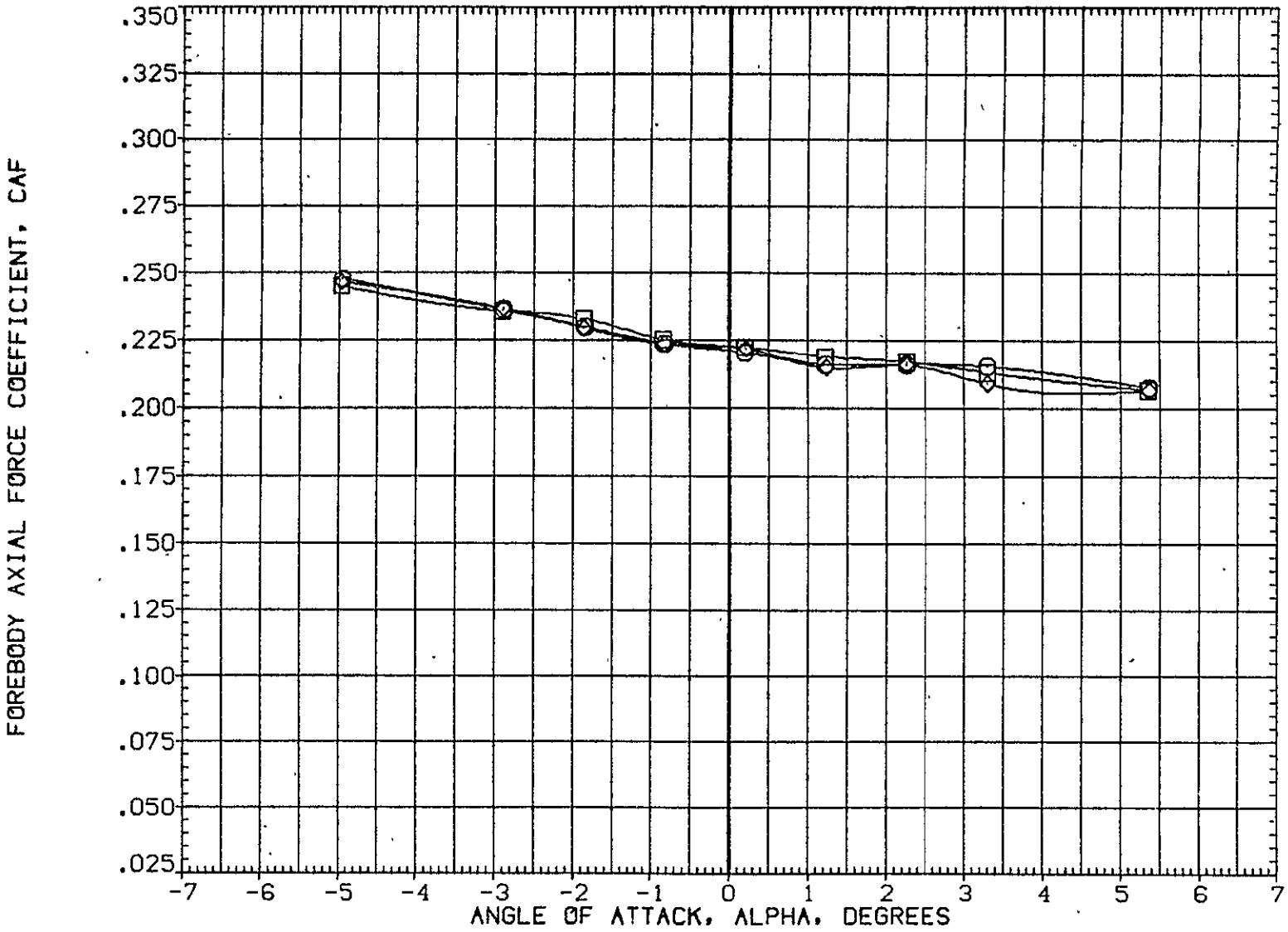


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO40)	○	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(AILO41)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140
(AILO42)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

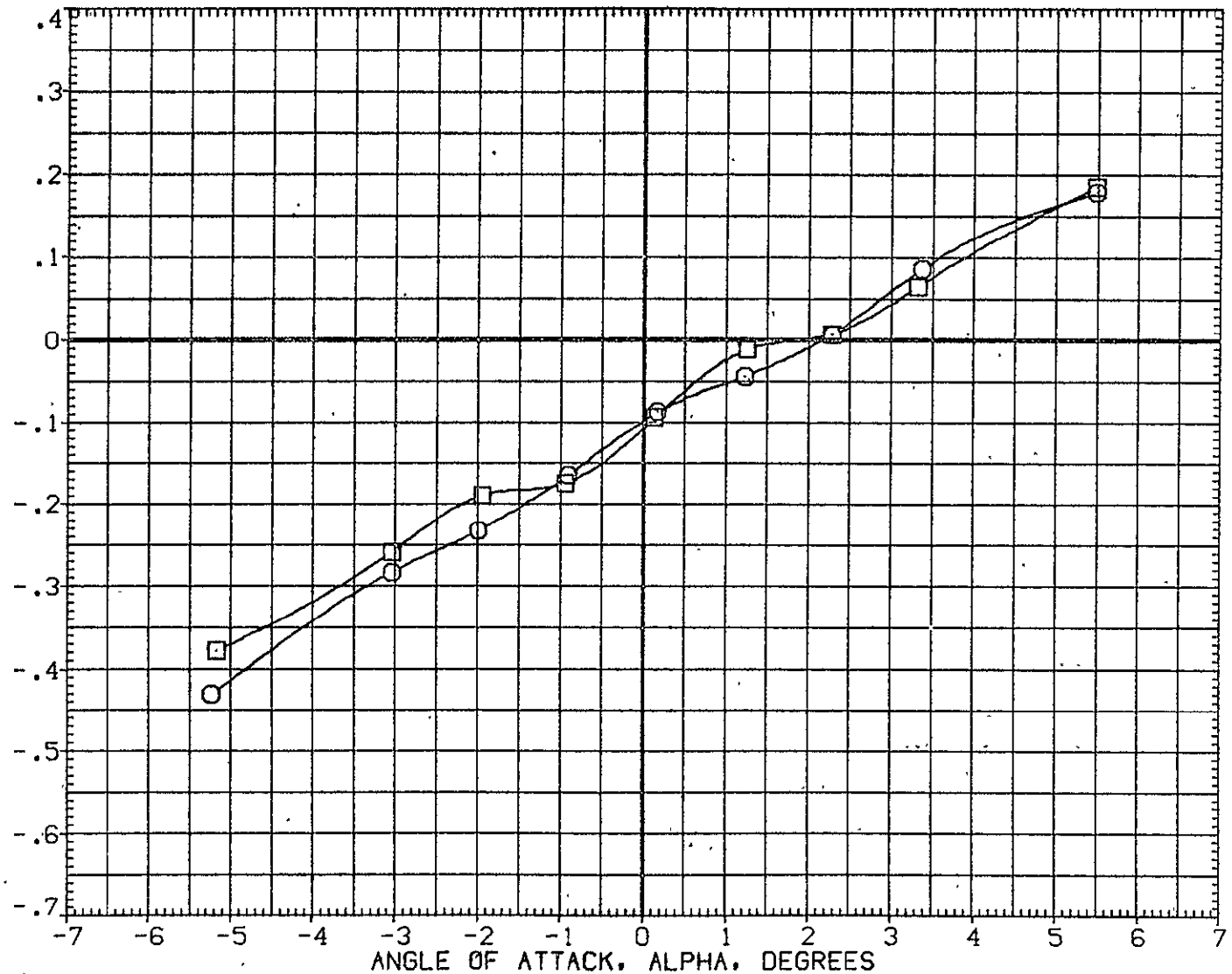


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

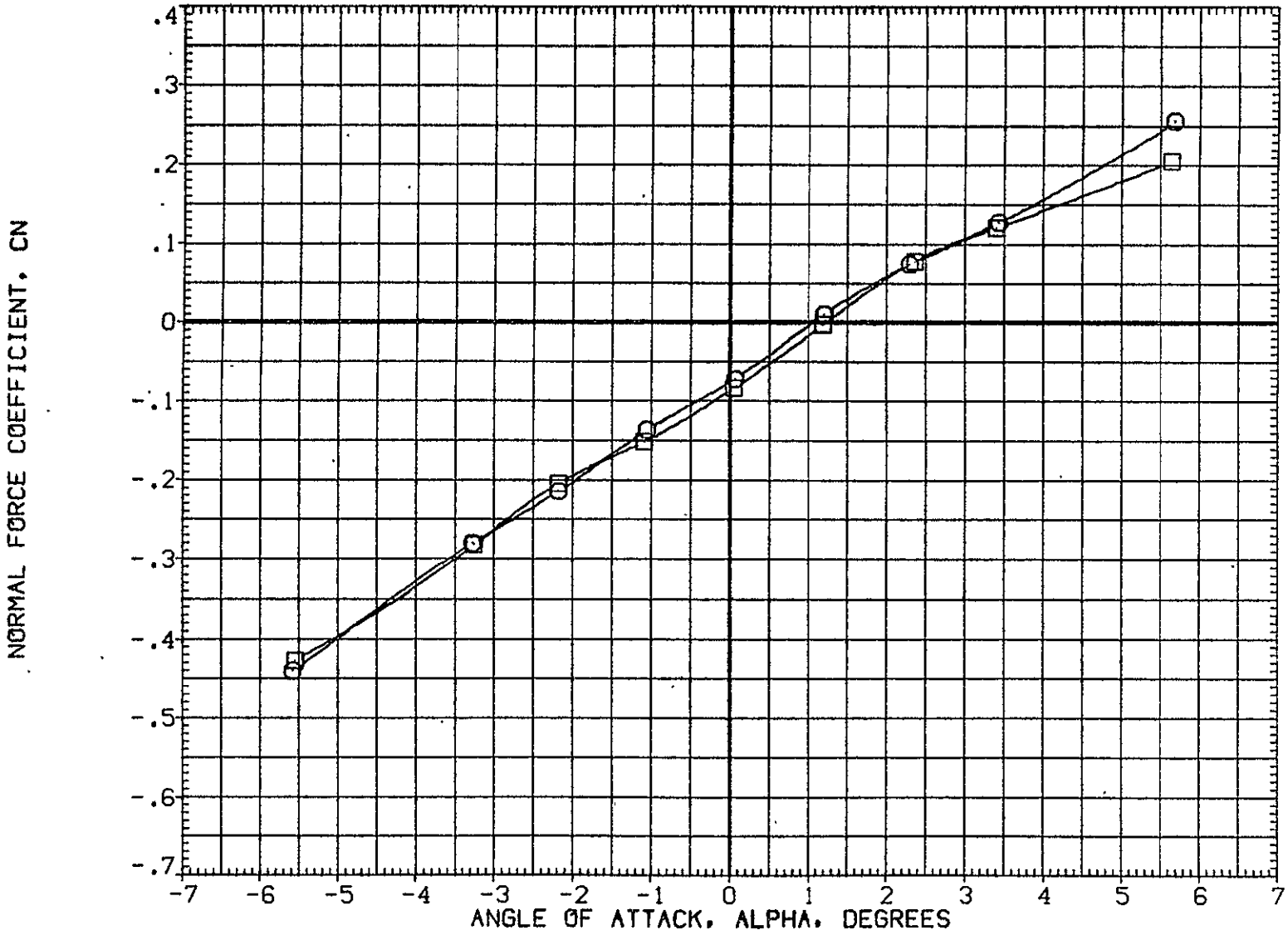


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B)LO43)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A)LO44)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

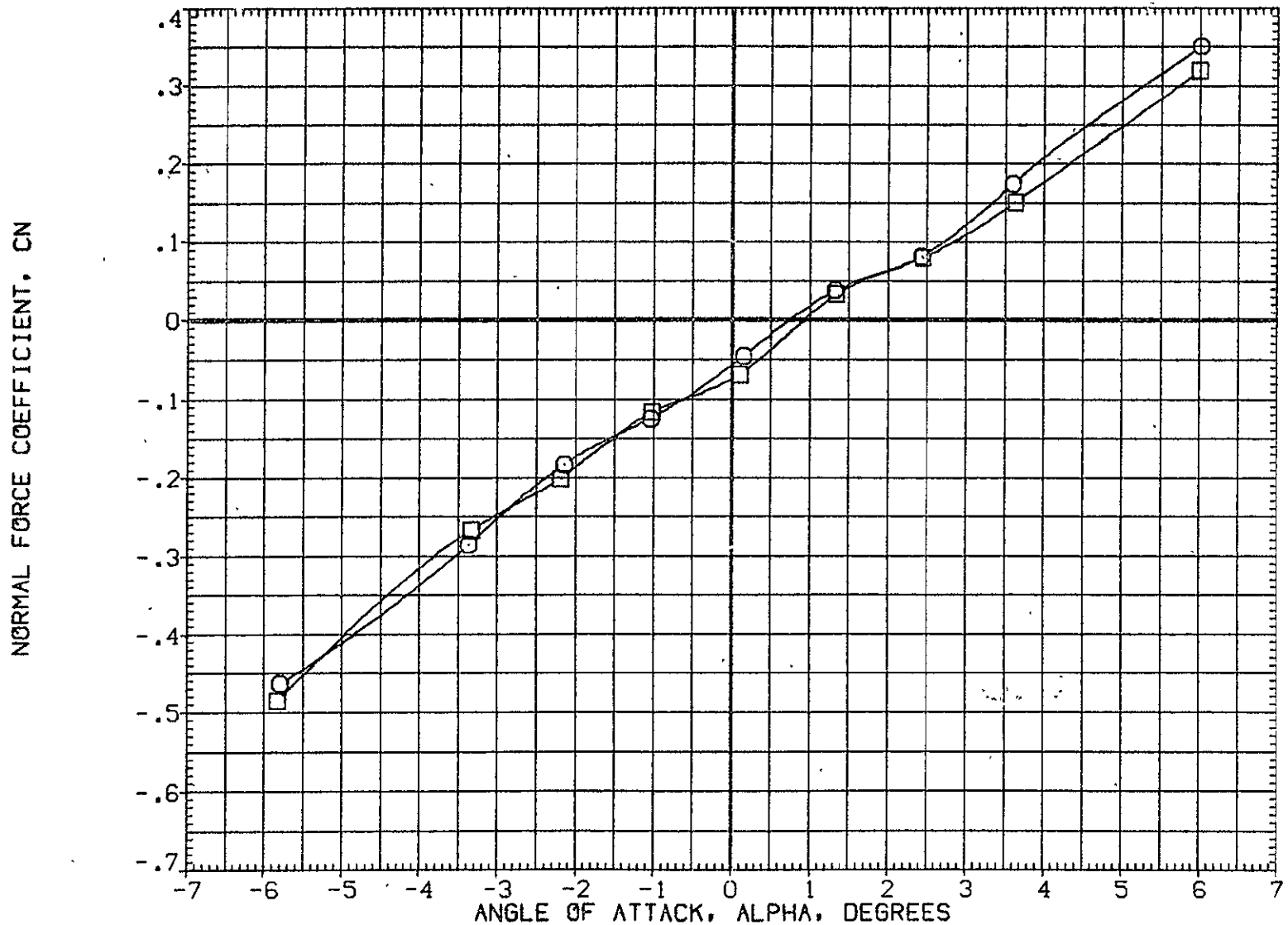


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE.	.0040	

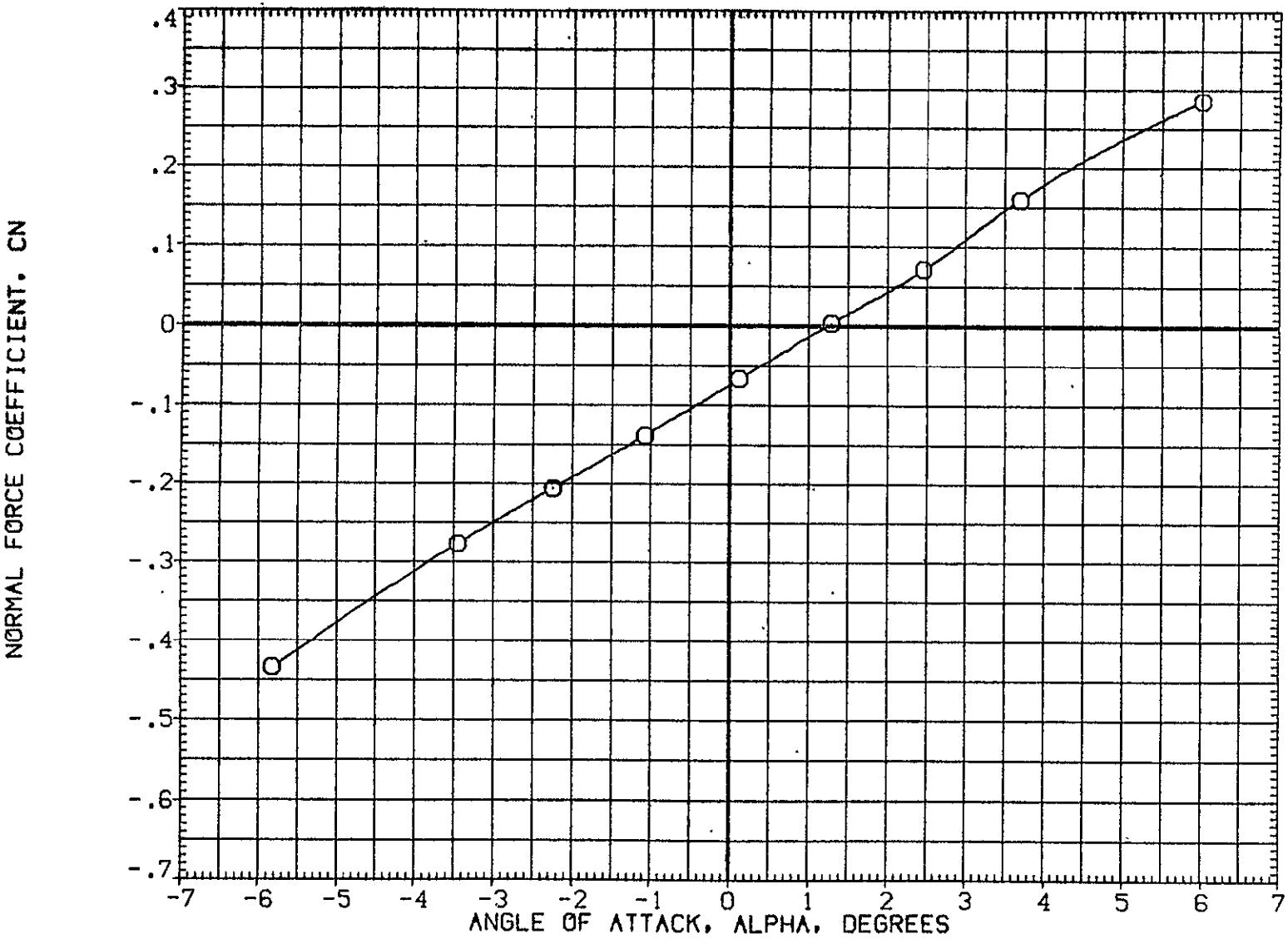


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

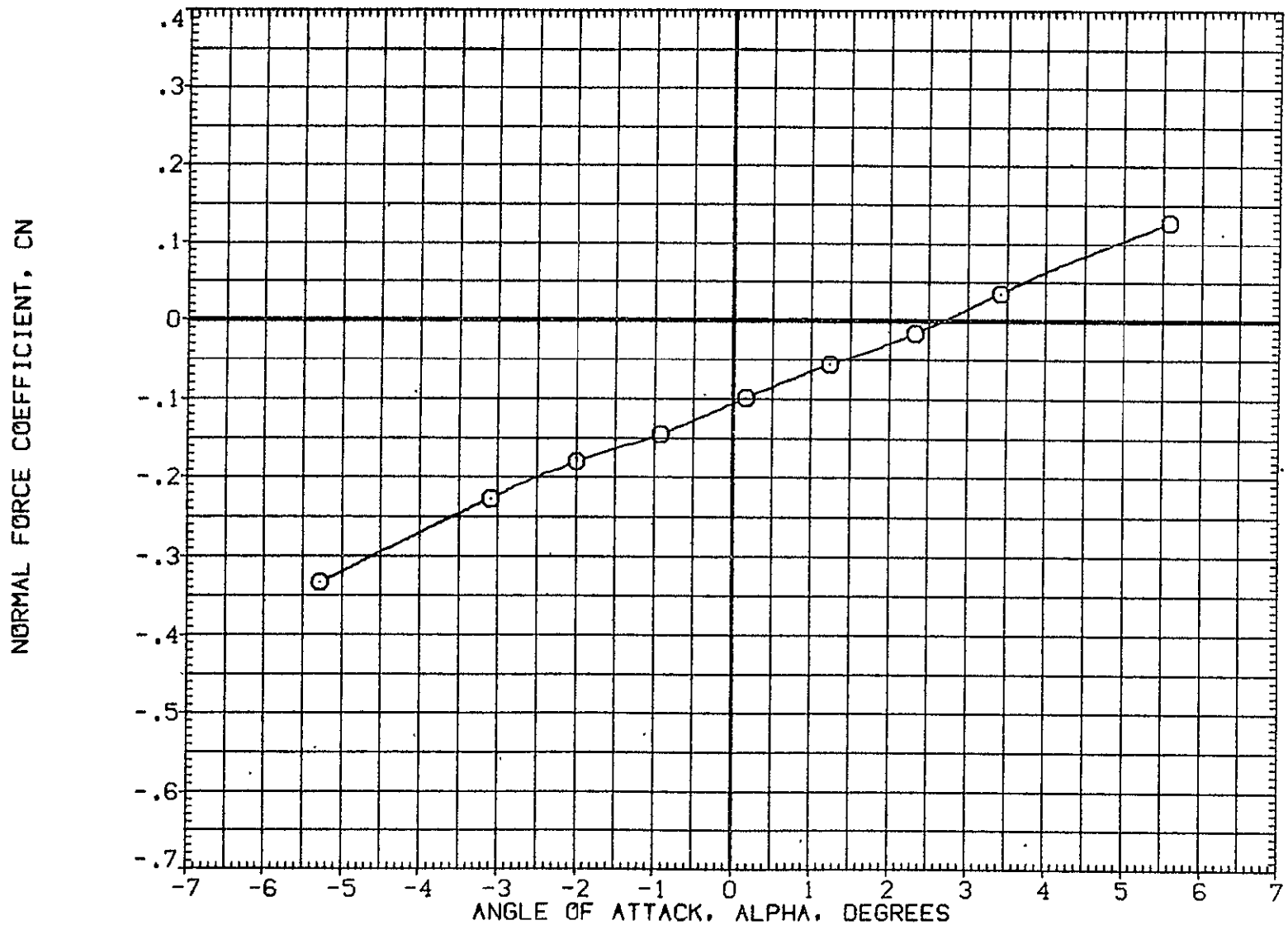


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

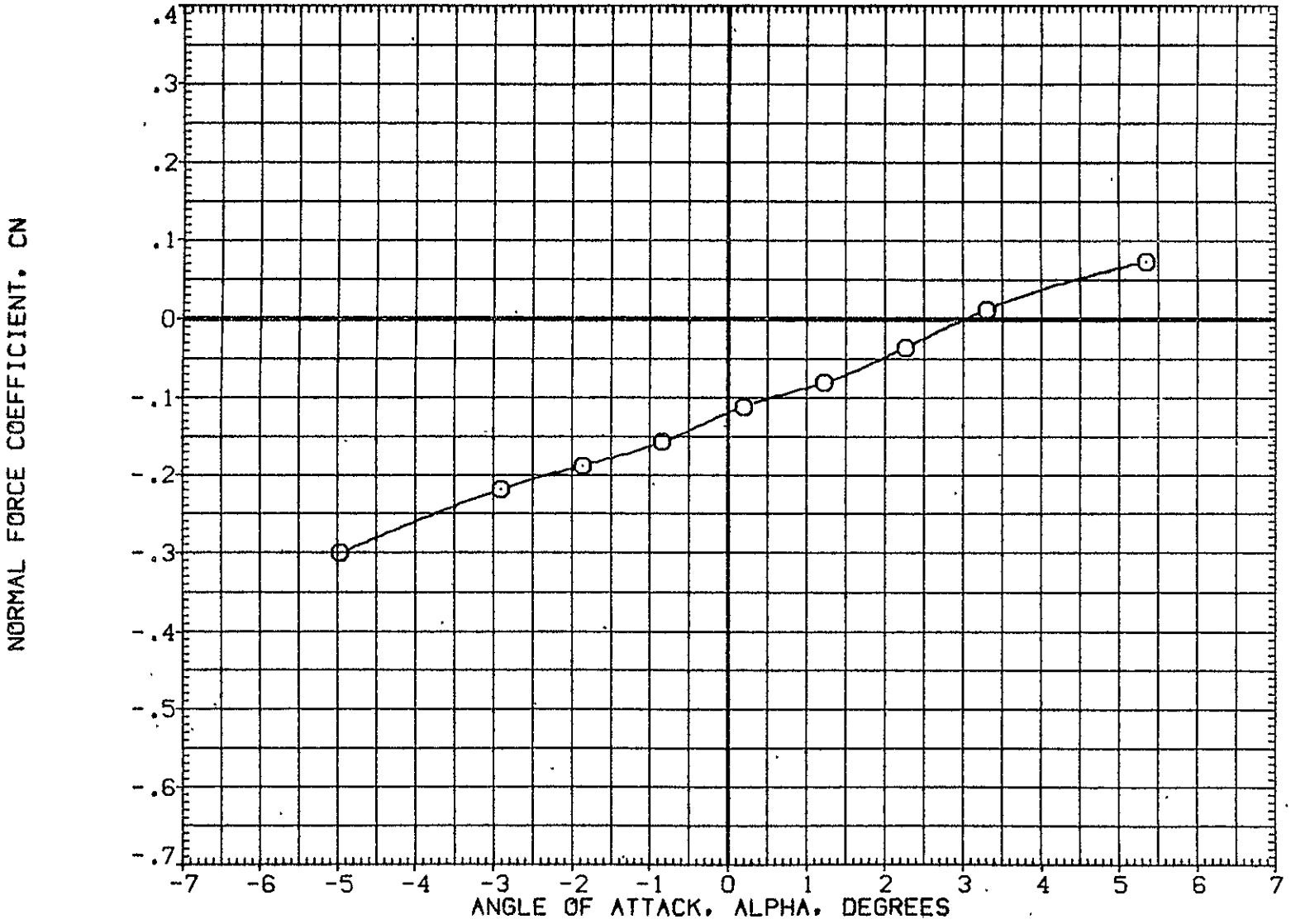


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

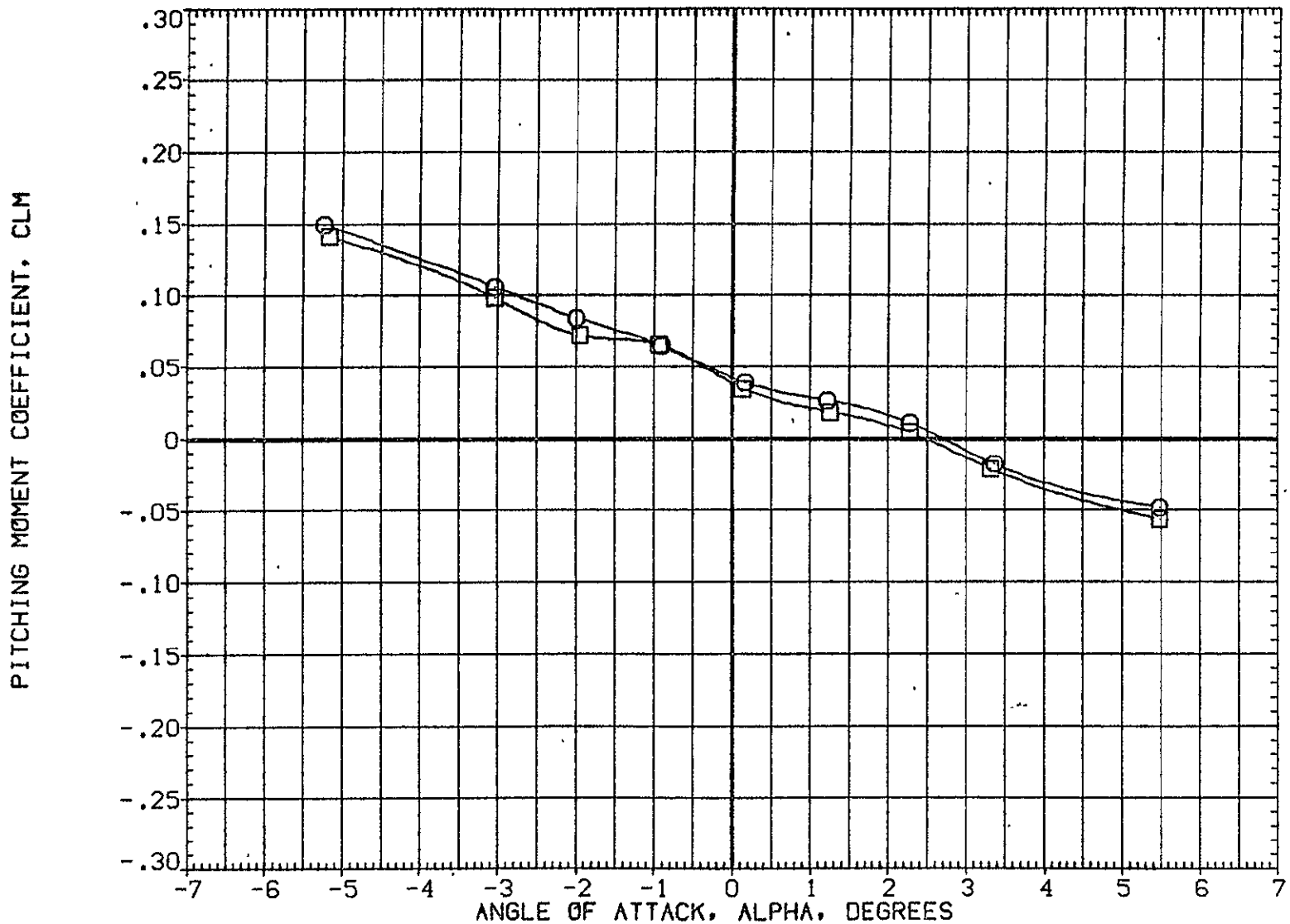


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02TIS1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02TIS3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

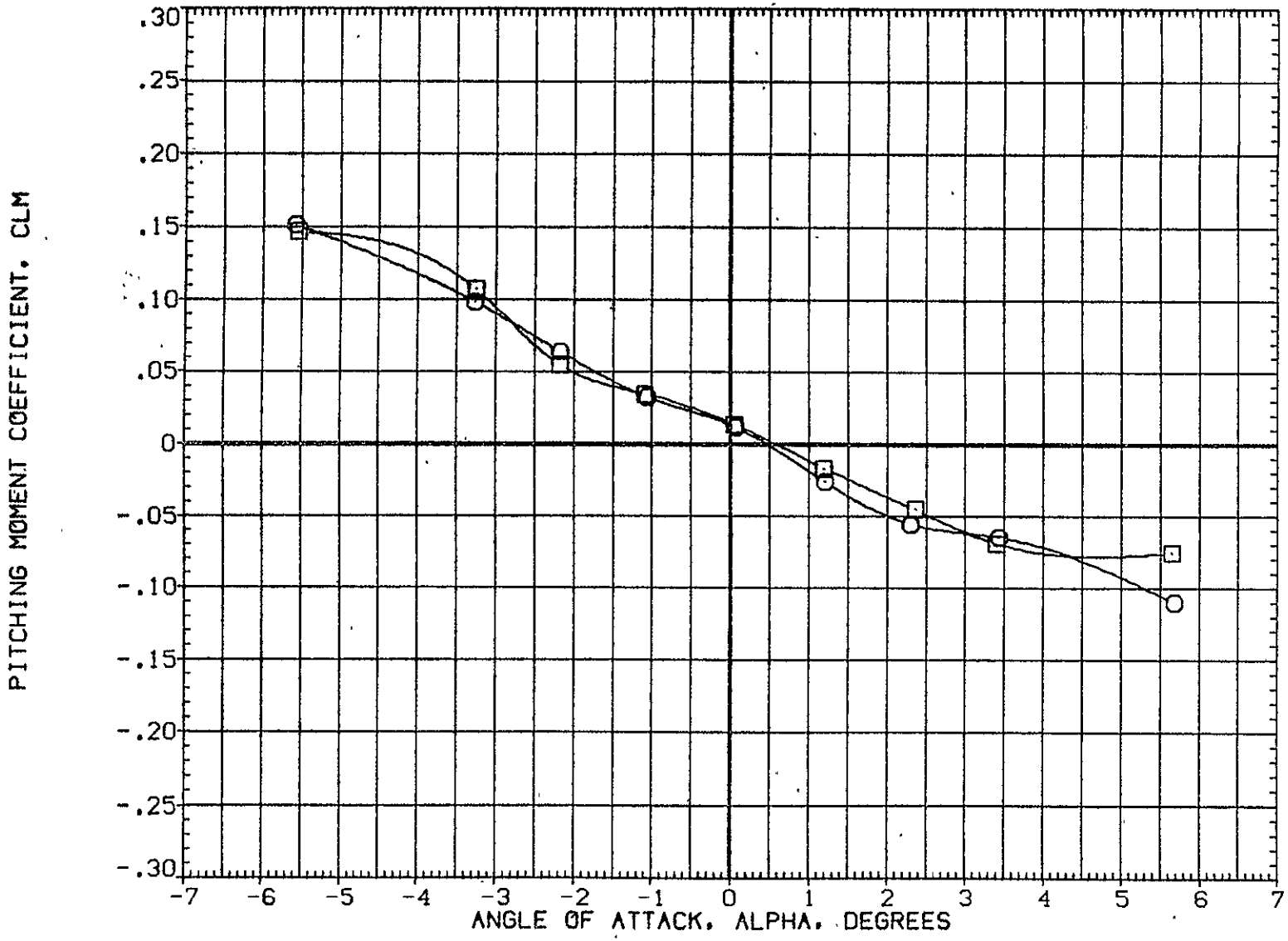


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS -

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

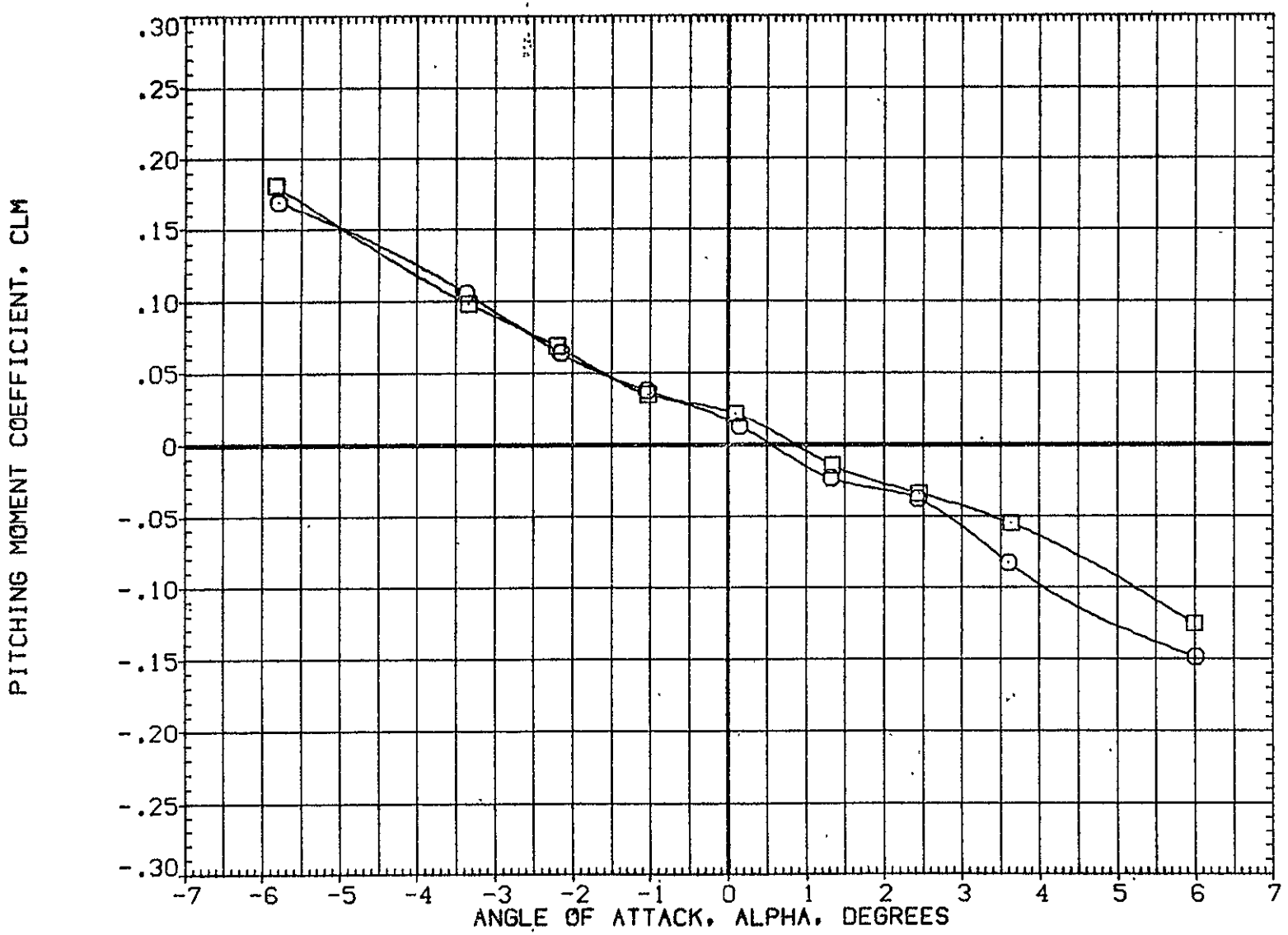


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

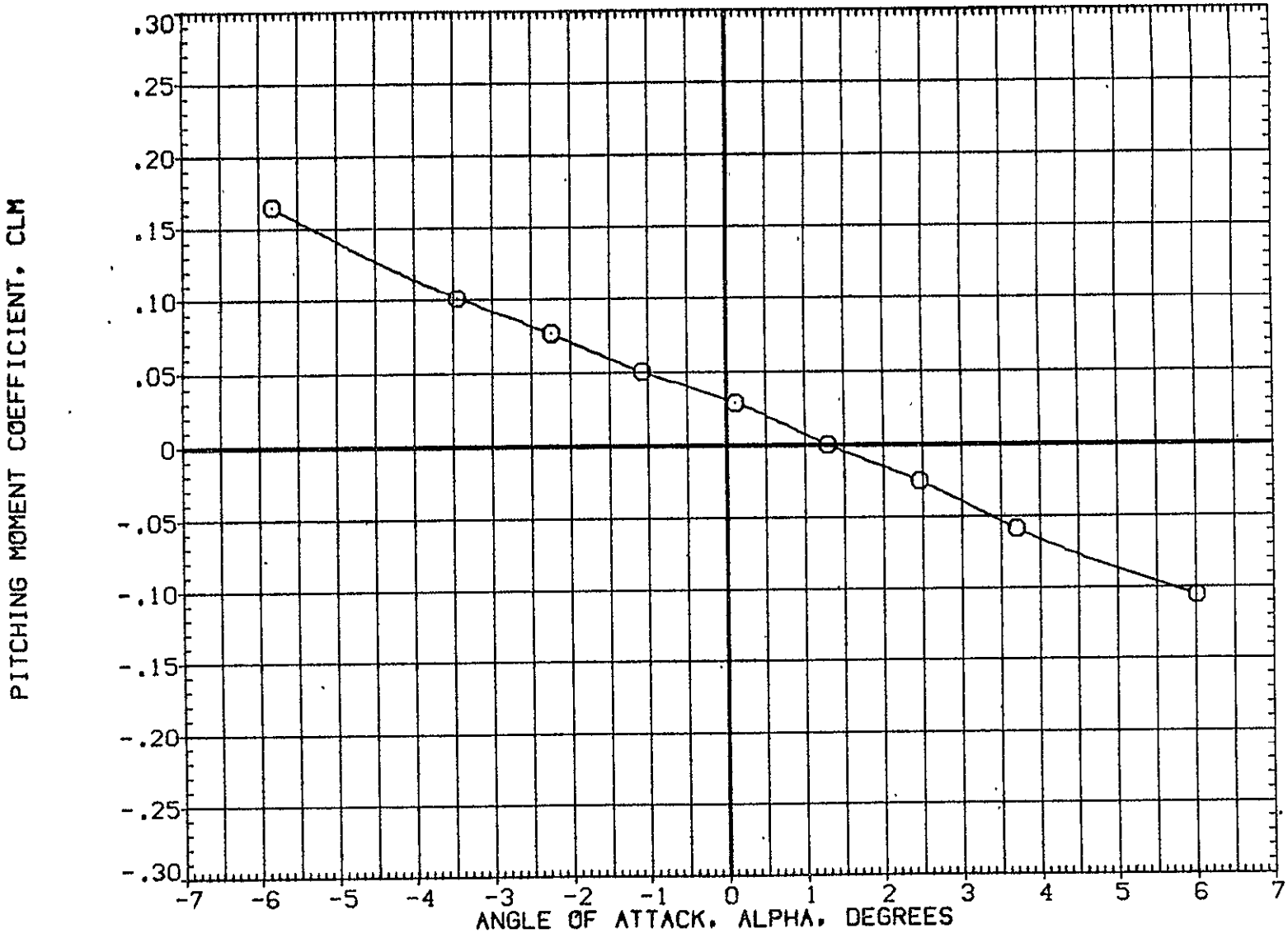


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1LO43)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1LO44)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

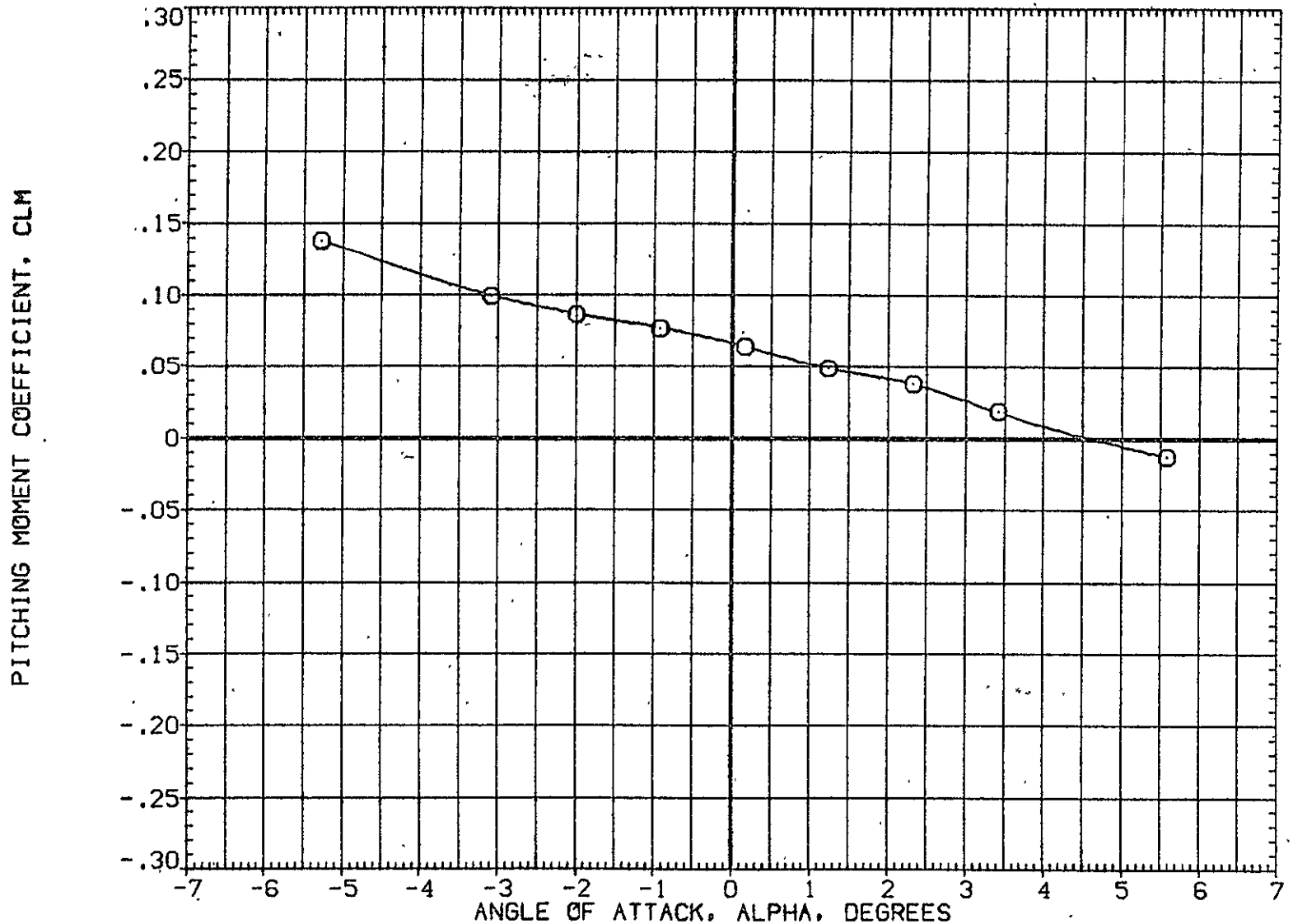


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

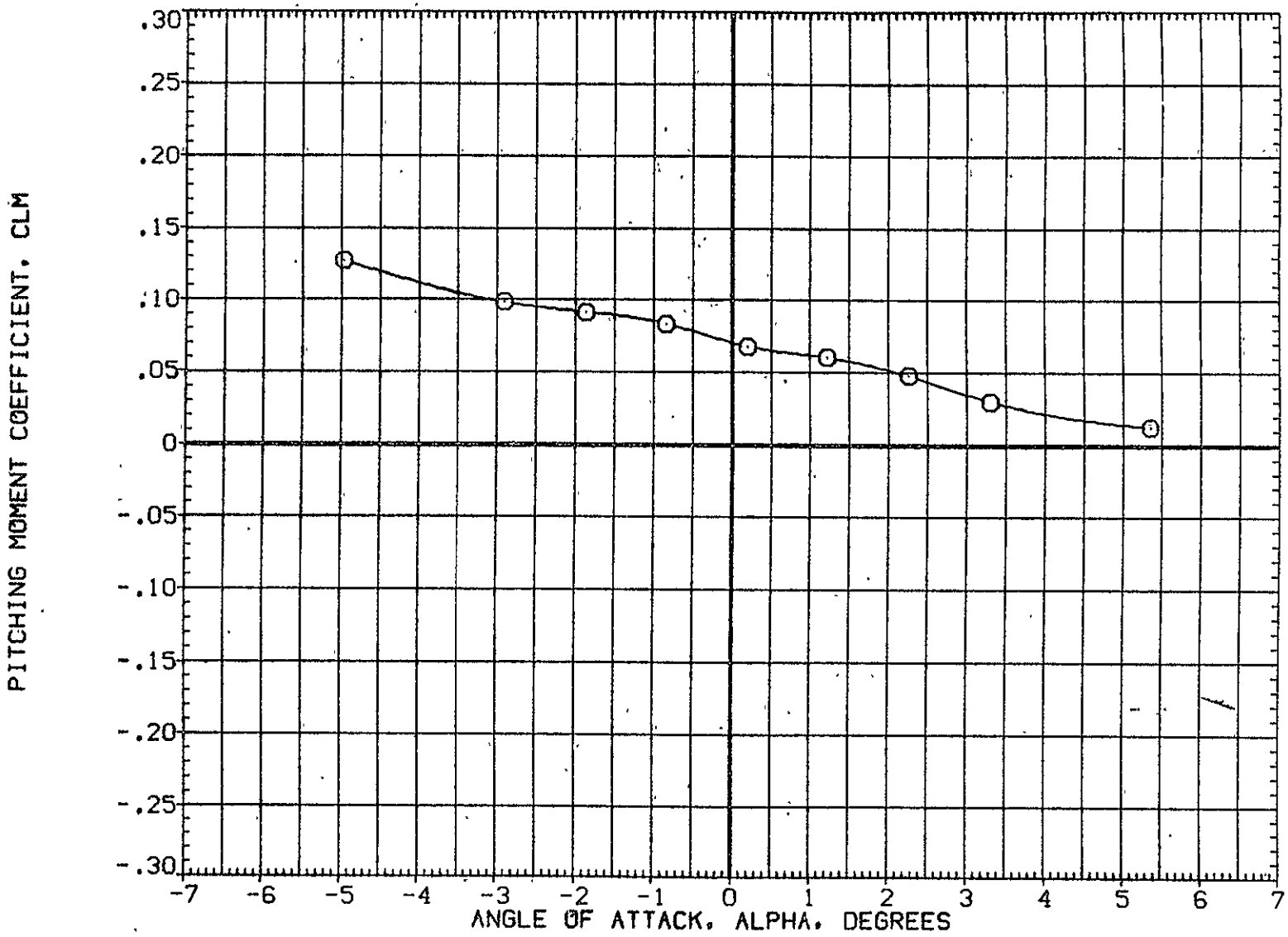


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000.	.140
(A1L044)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

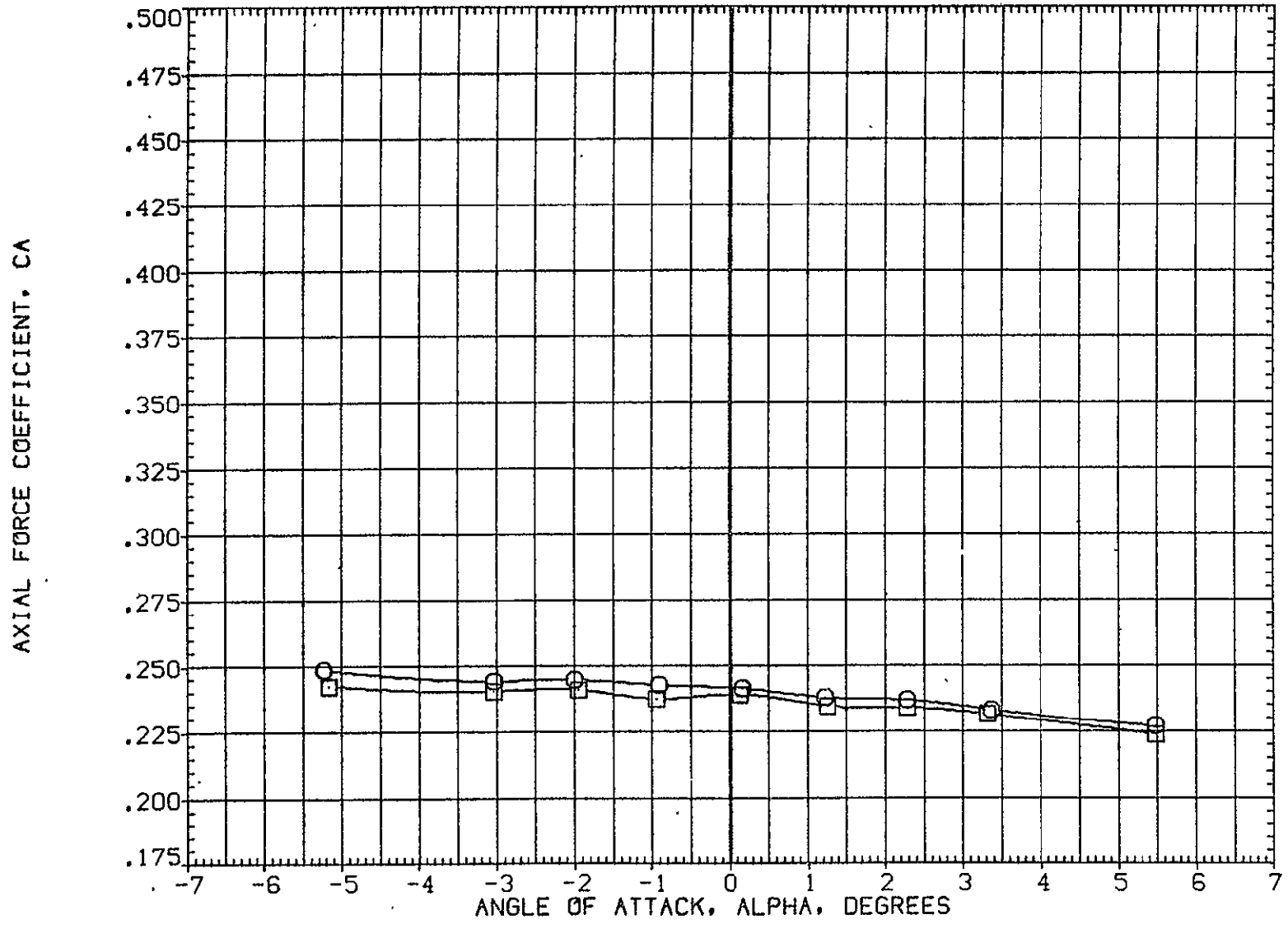


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

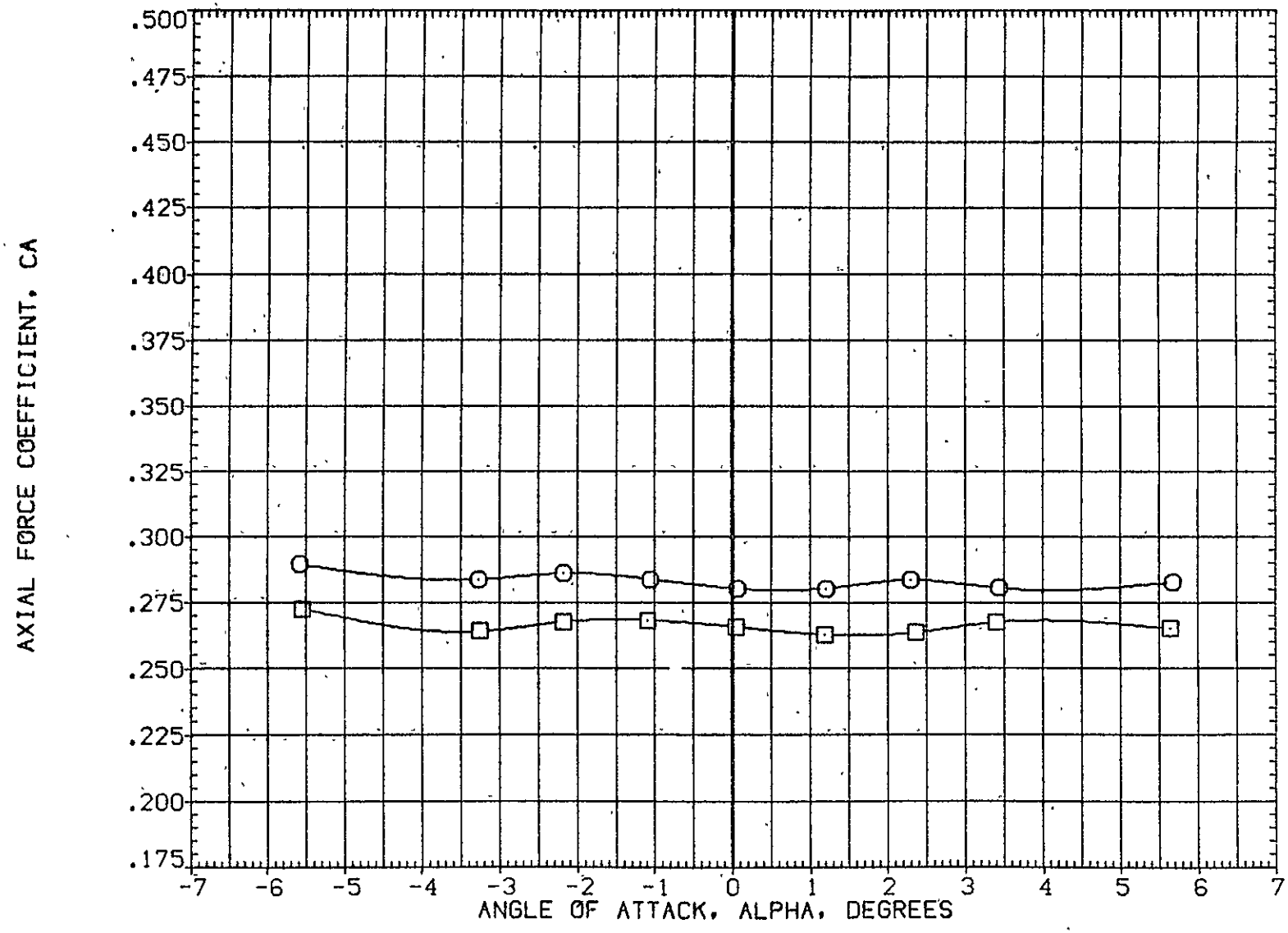


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

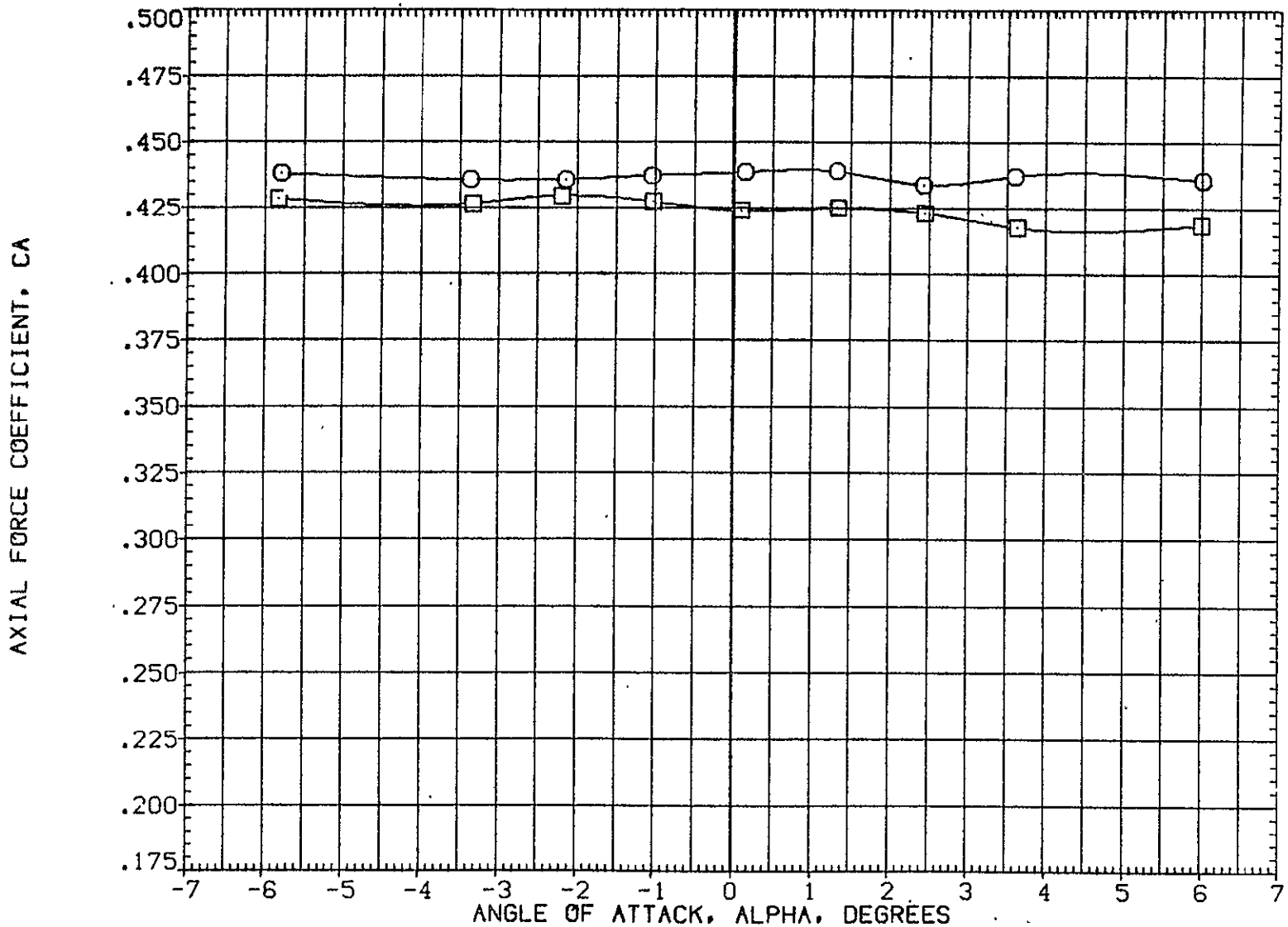


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

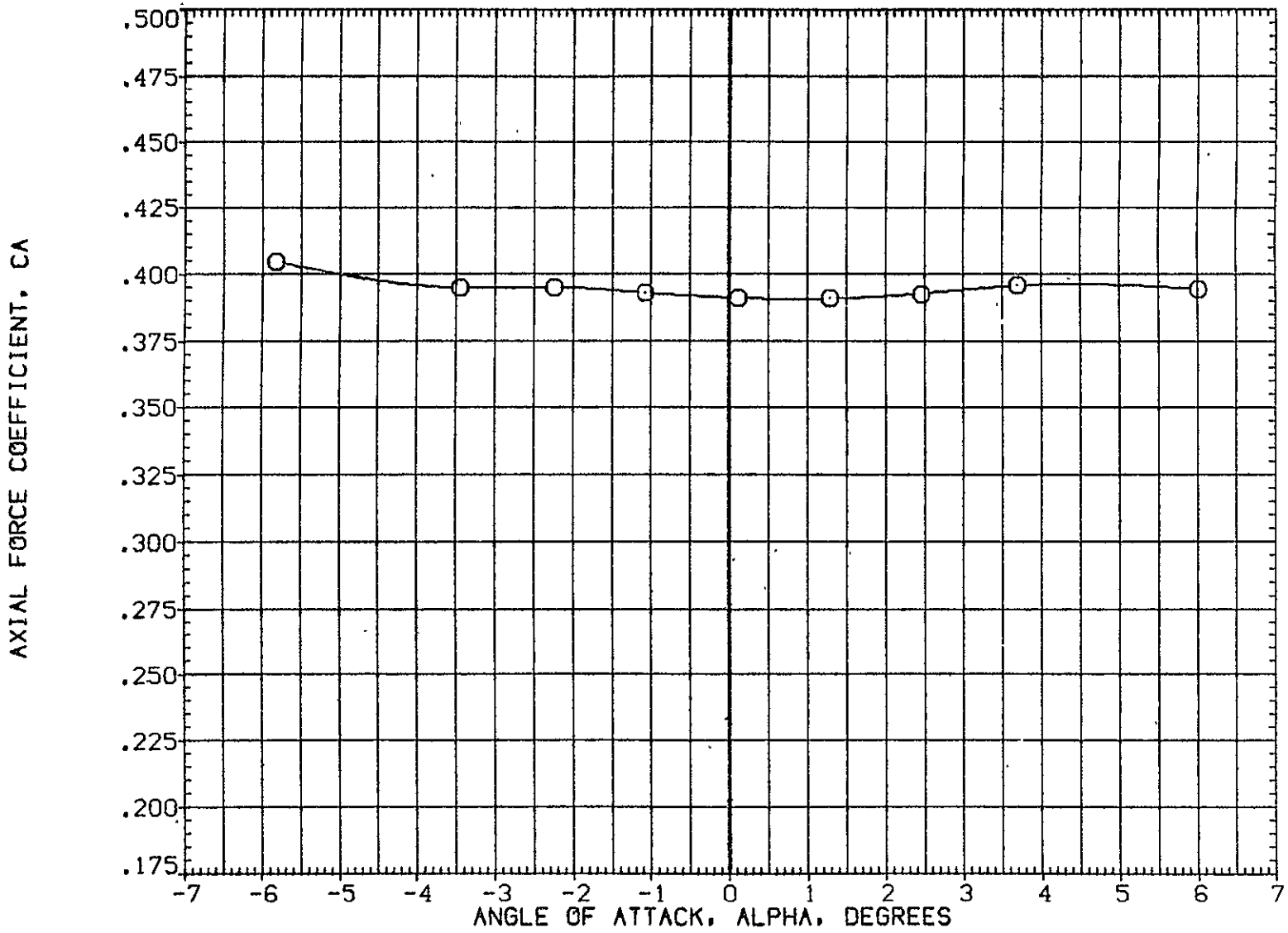


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1LO43)	⊡	MSFC TWT 600 (FA14)	G2T1S1A1R2K1	.000	.000	90.000	.140
(A1LO44)	⊟	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

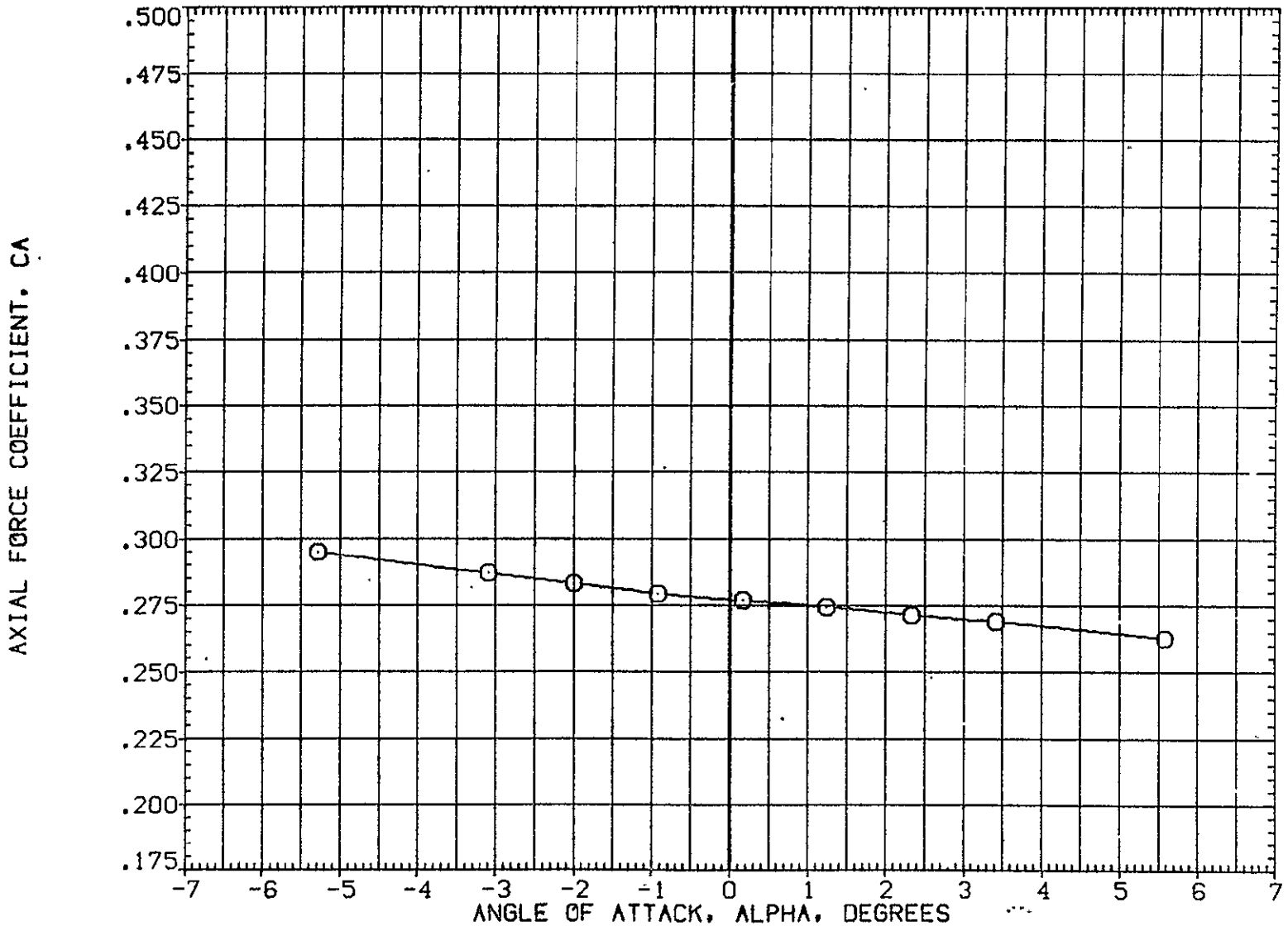


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043) ○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044) □	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

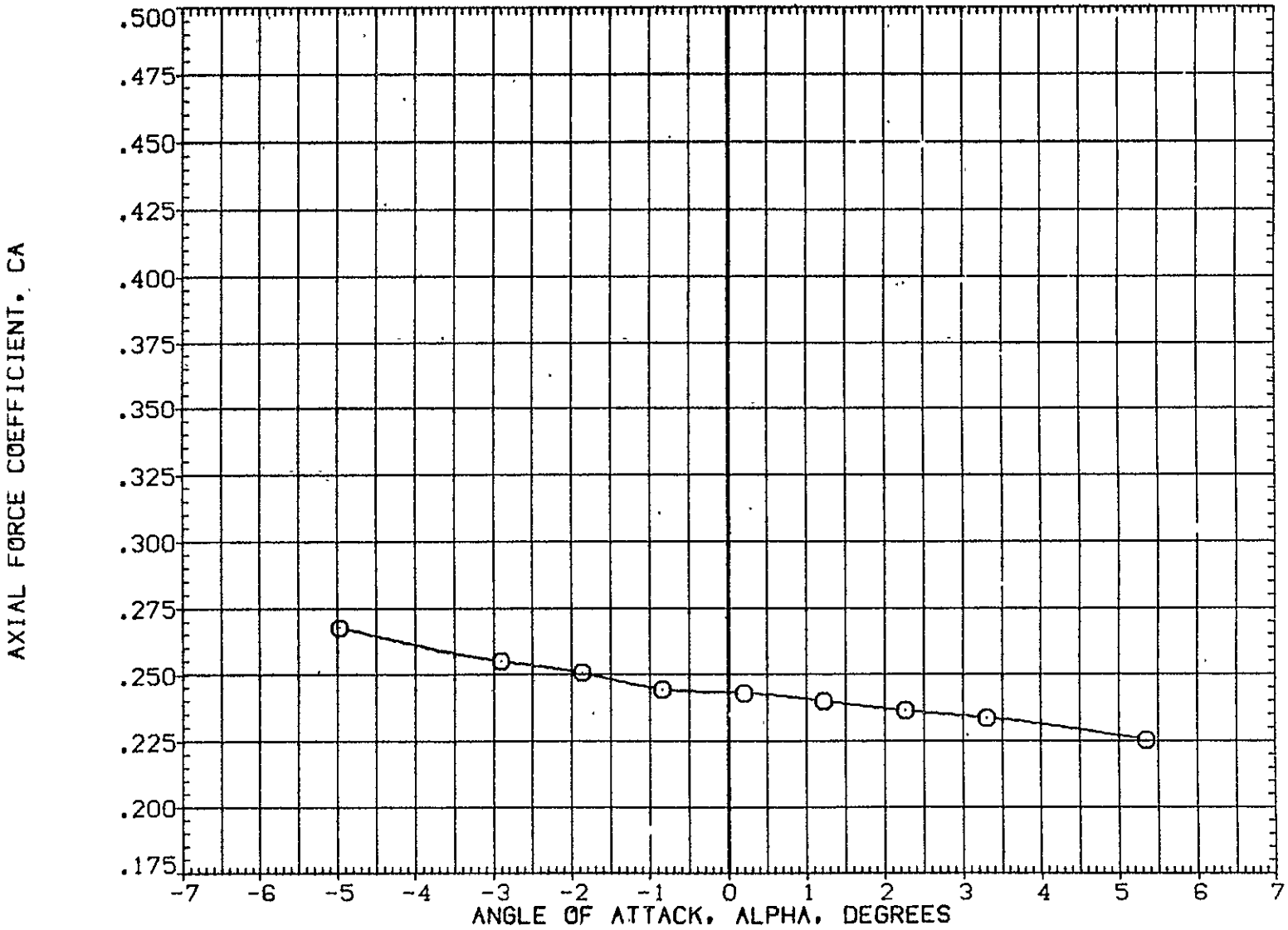


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	⊟	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	⊟	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

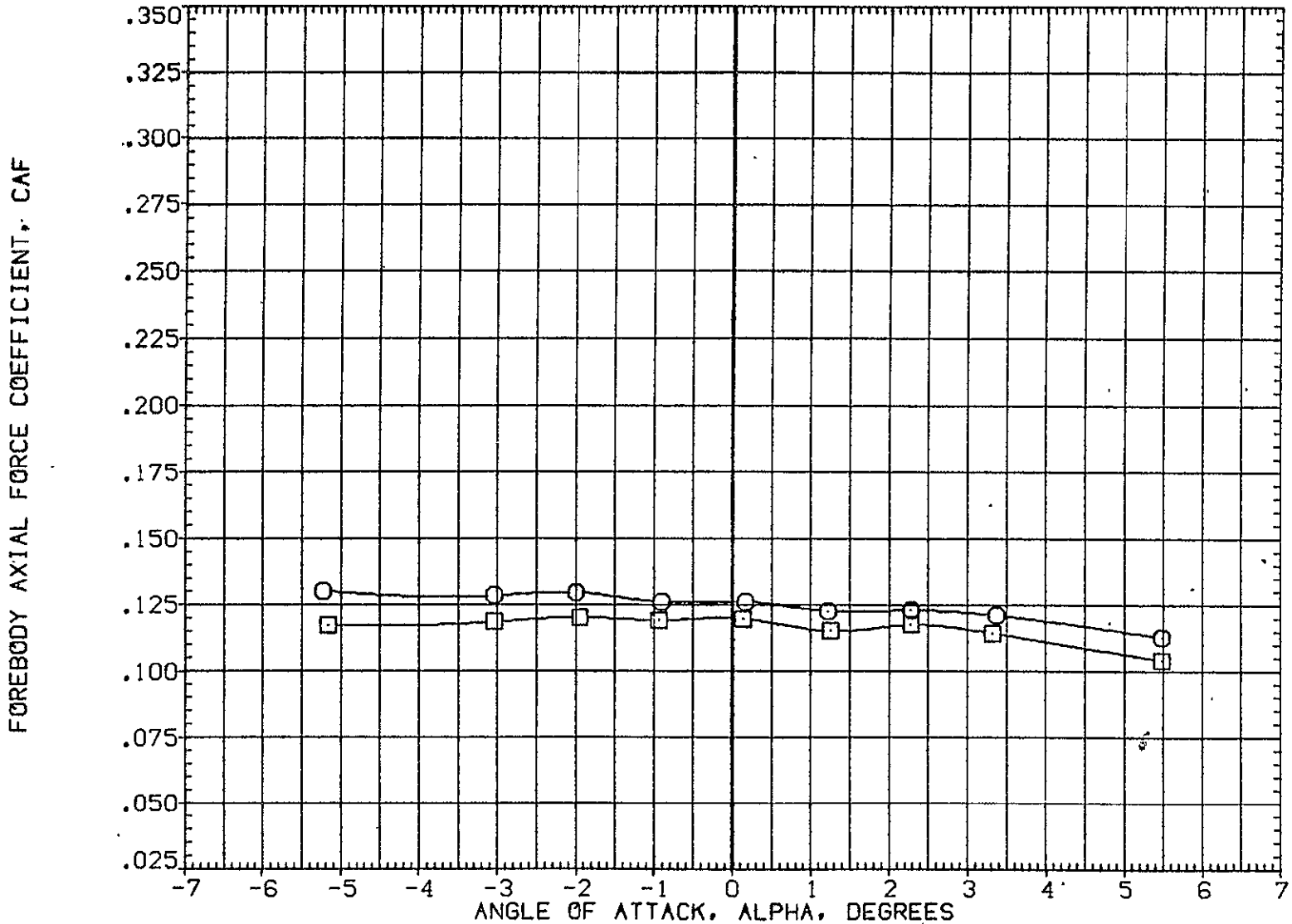


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

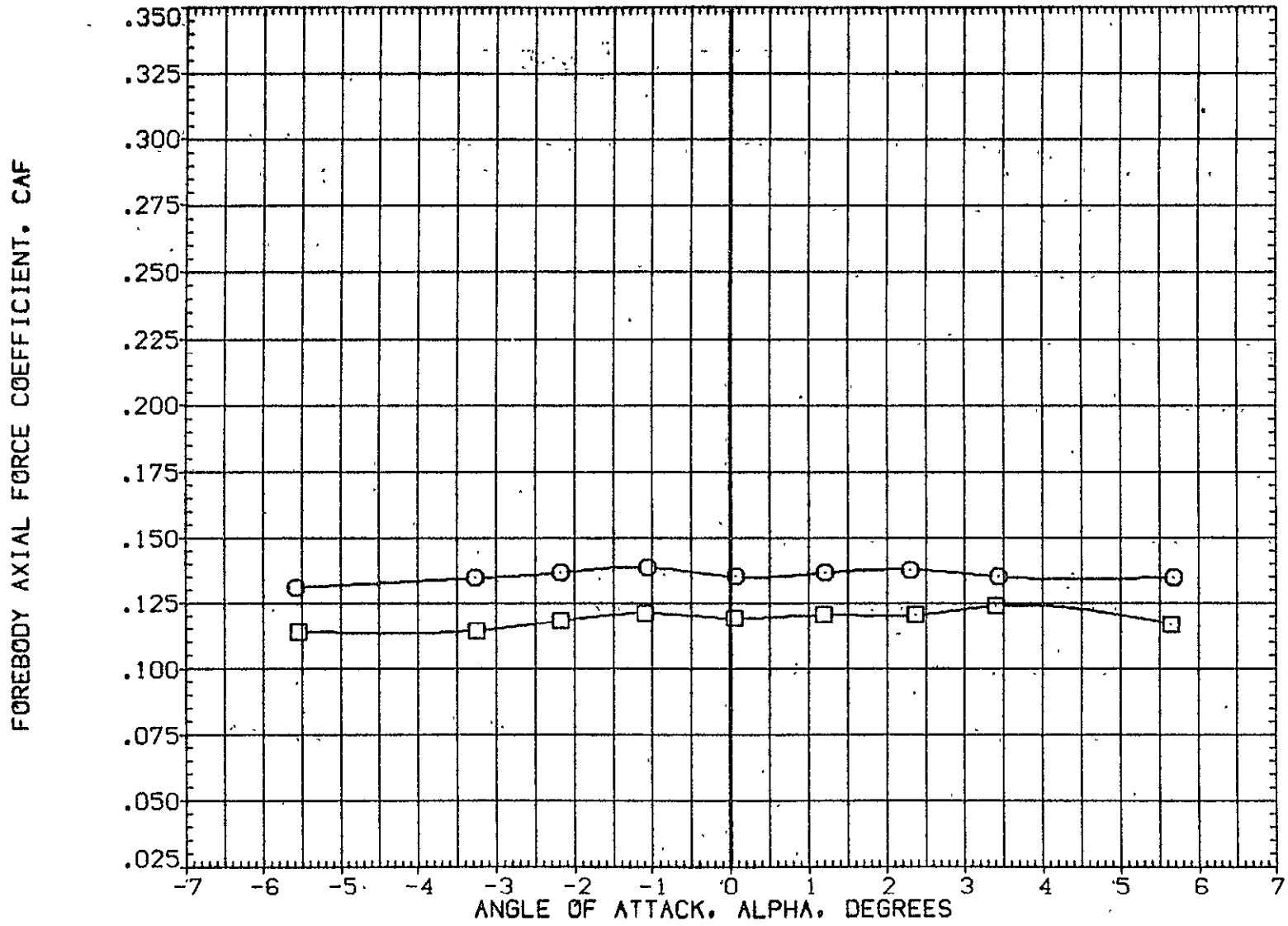


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(BIL043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(AIL044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

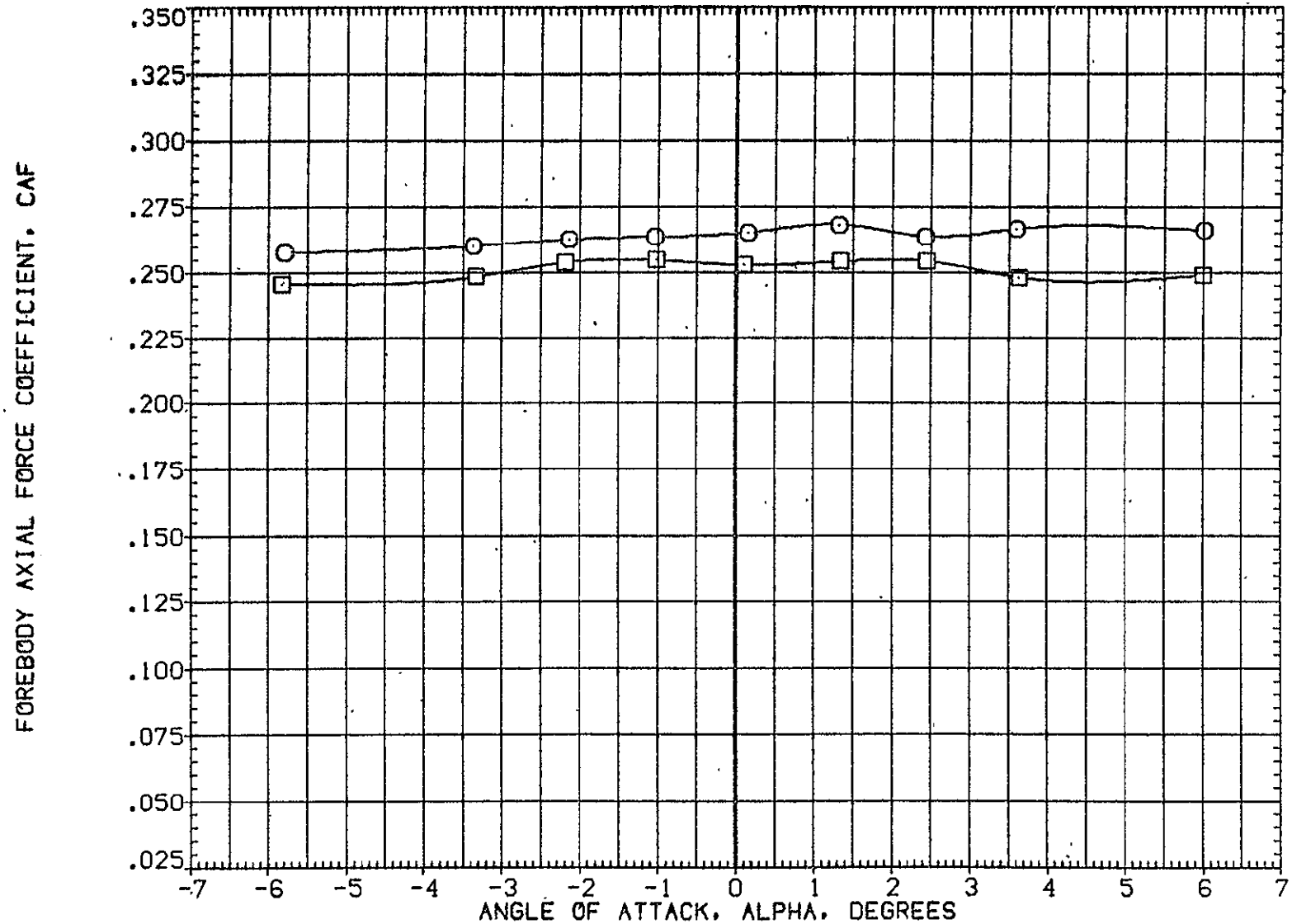


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(B)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	○	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

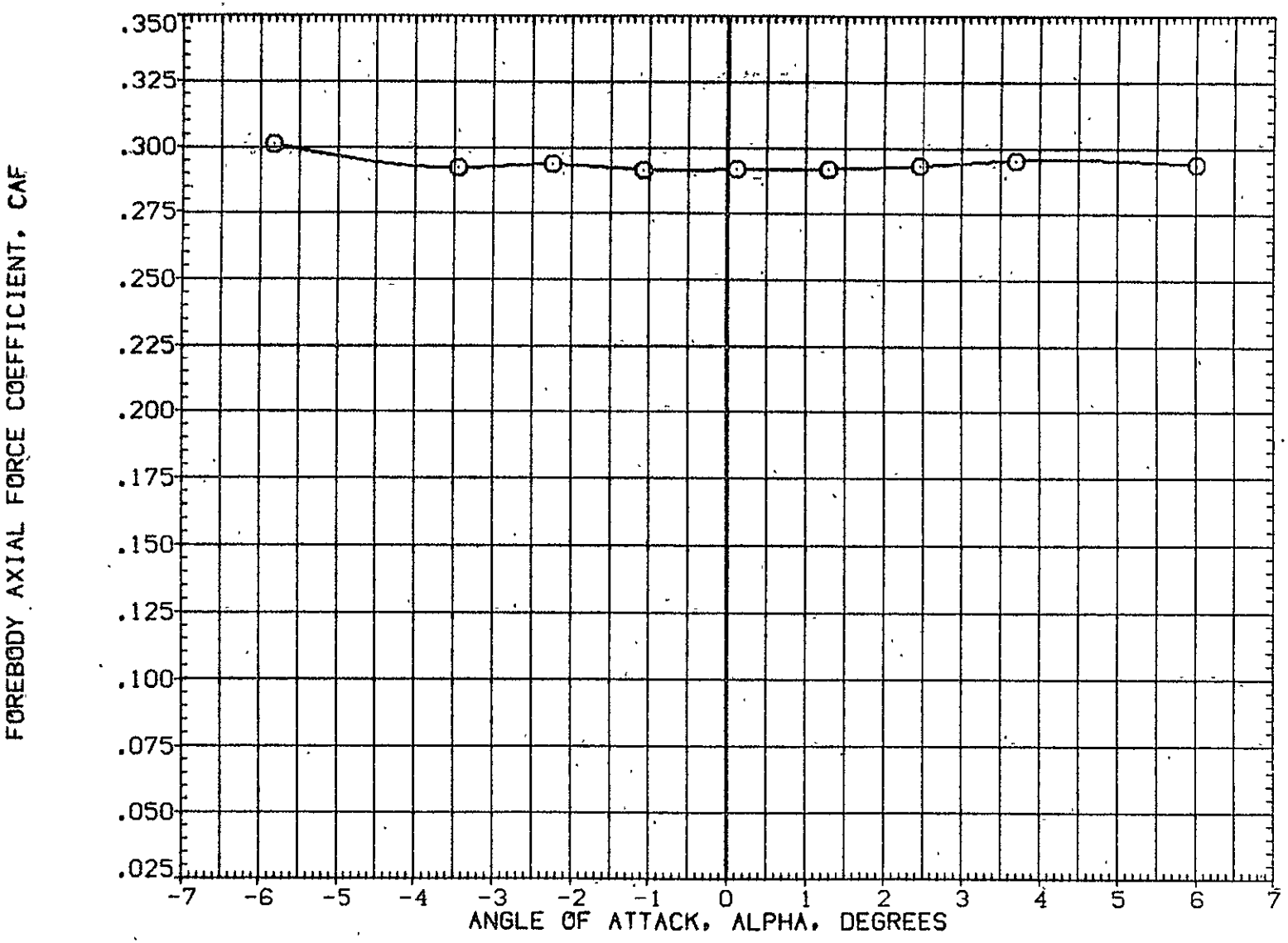


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(81L043)		MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)		DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

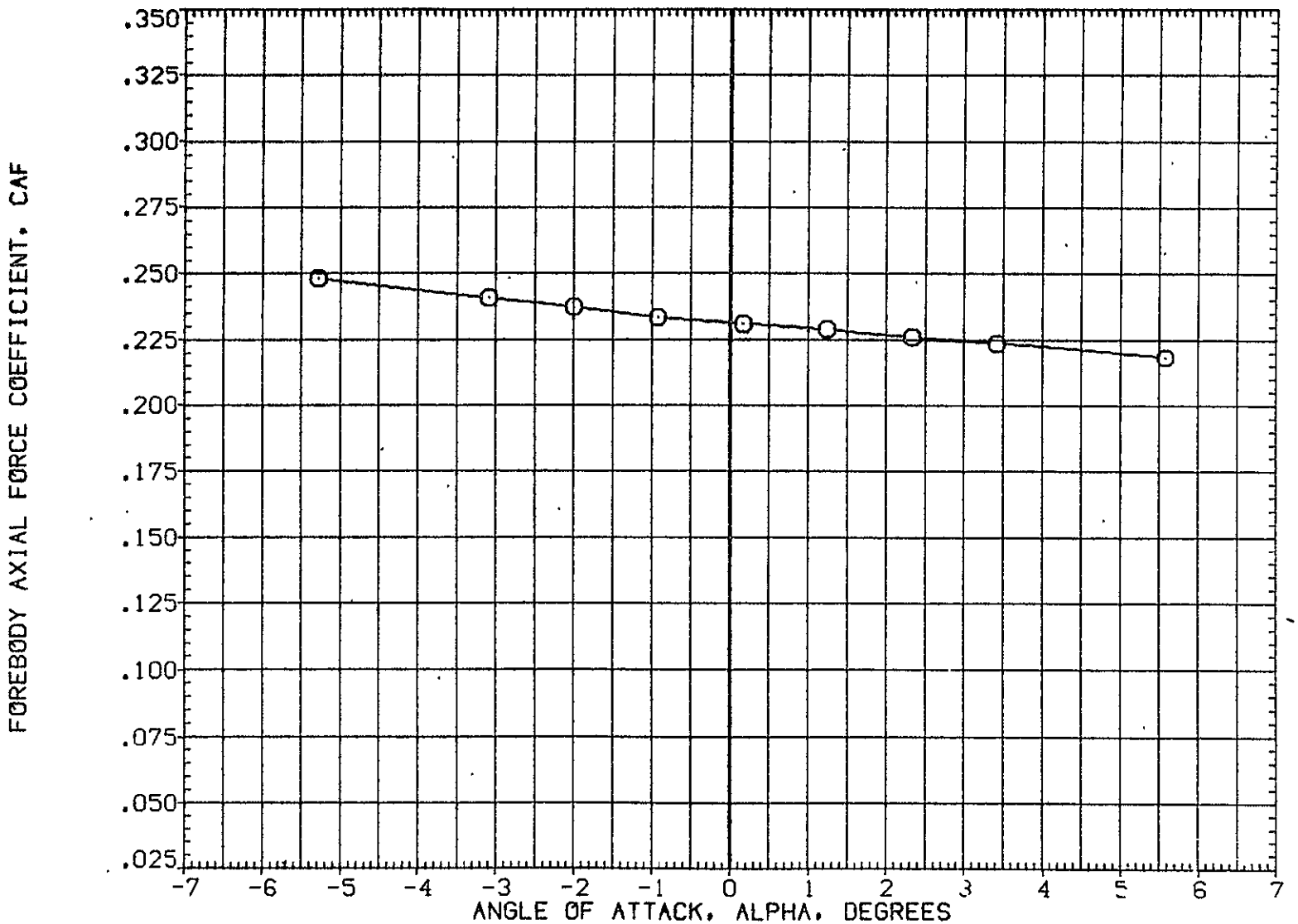


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(D)MACH = 1.98

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(BILD43)	☐	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(AILD44)	☐	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

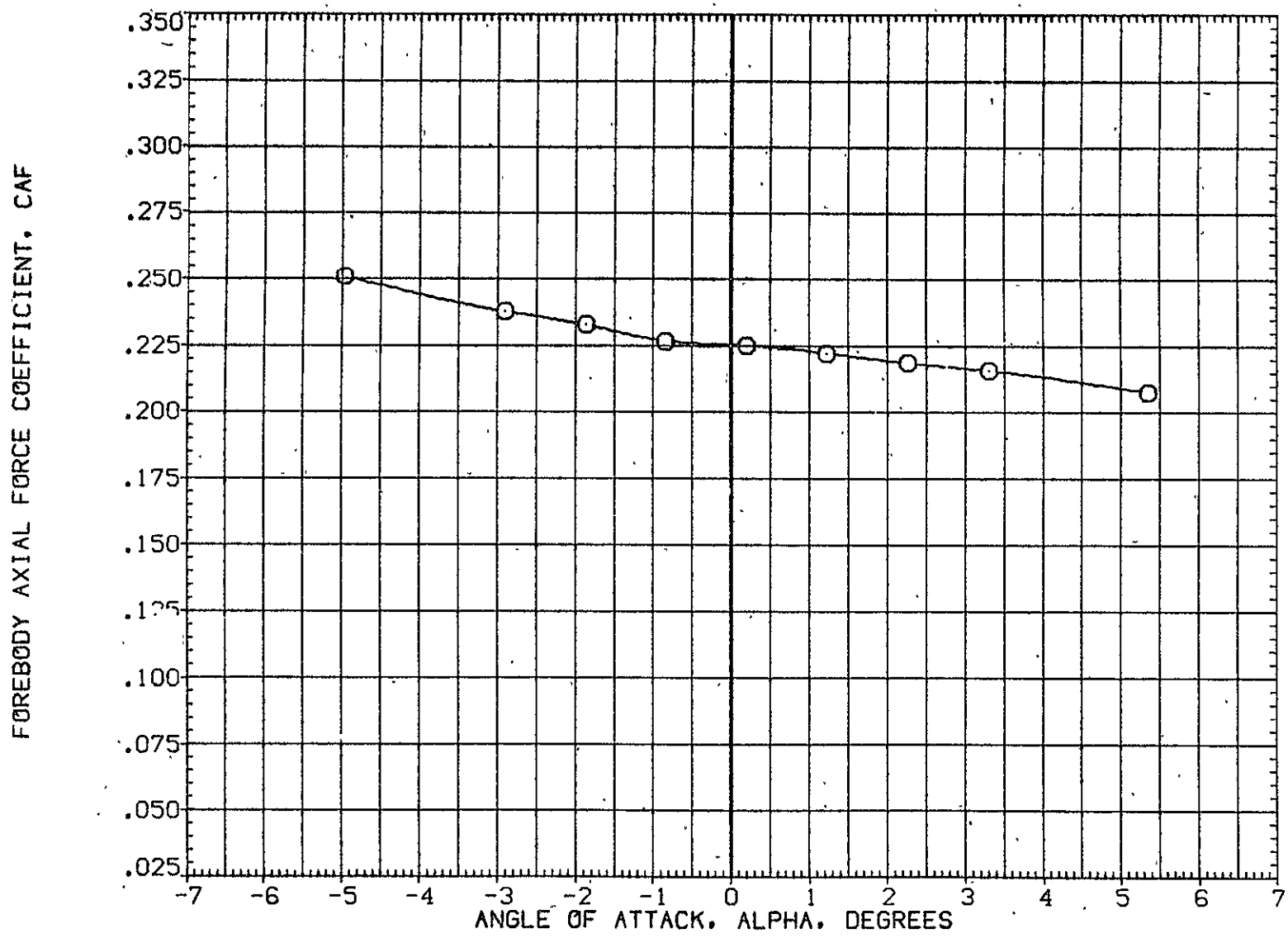


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(E)MACH = 3.48

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(B1L043)	⊡	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140
(A1L044)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

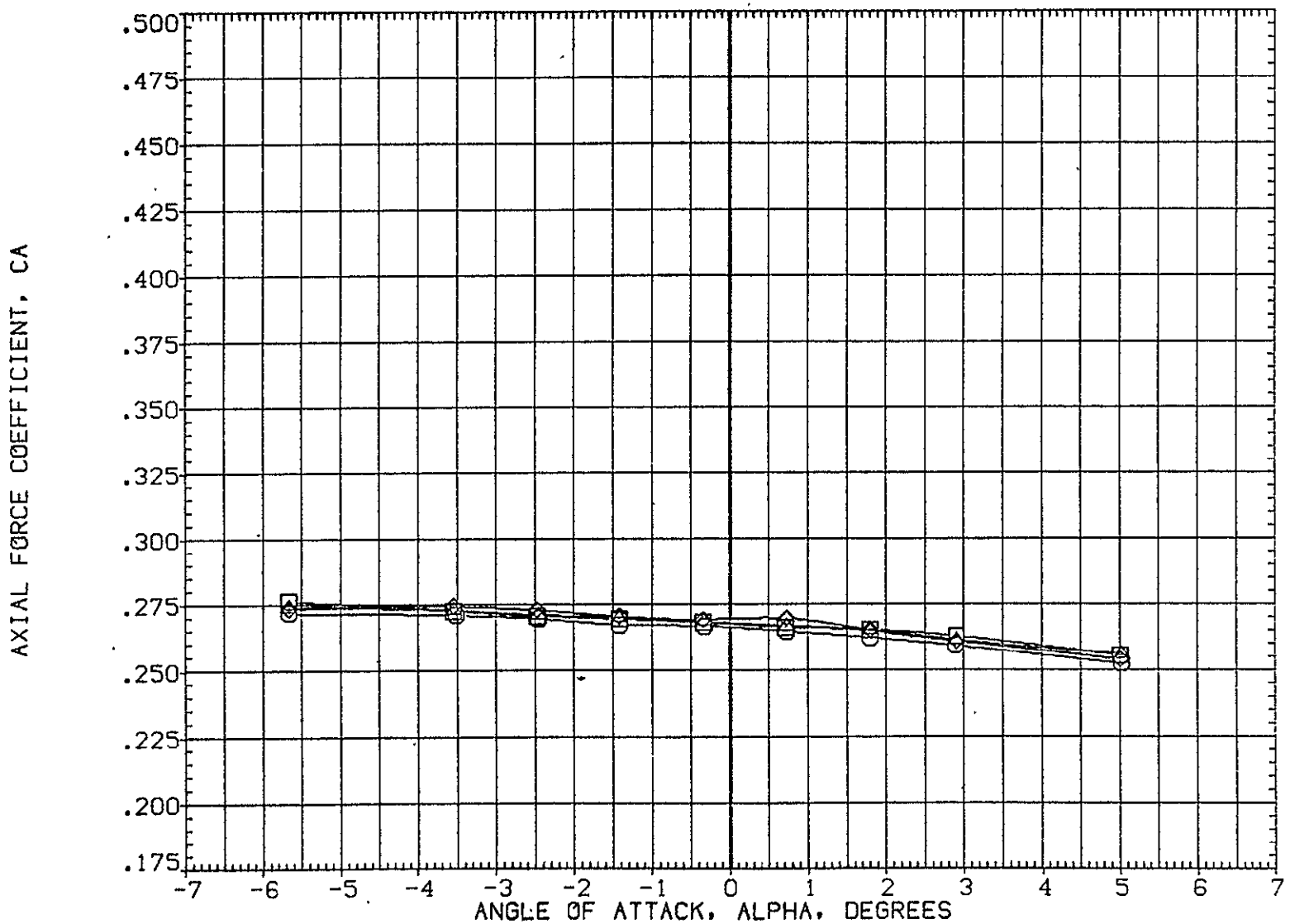


LONGITUDINAL STABILITY AND DRAG CHARACTERISTICS OF THE SHUTTLE WITH FAIRINGS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L001)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

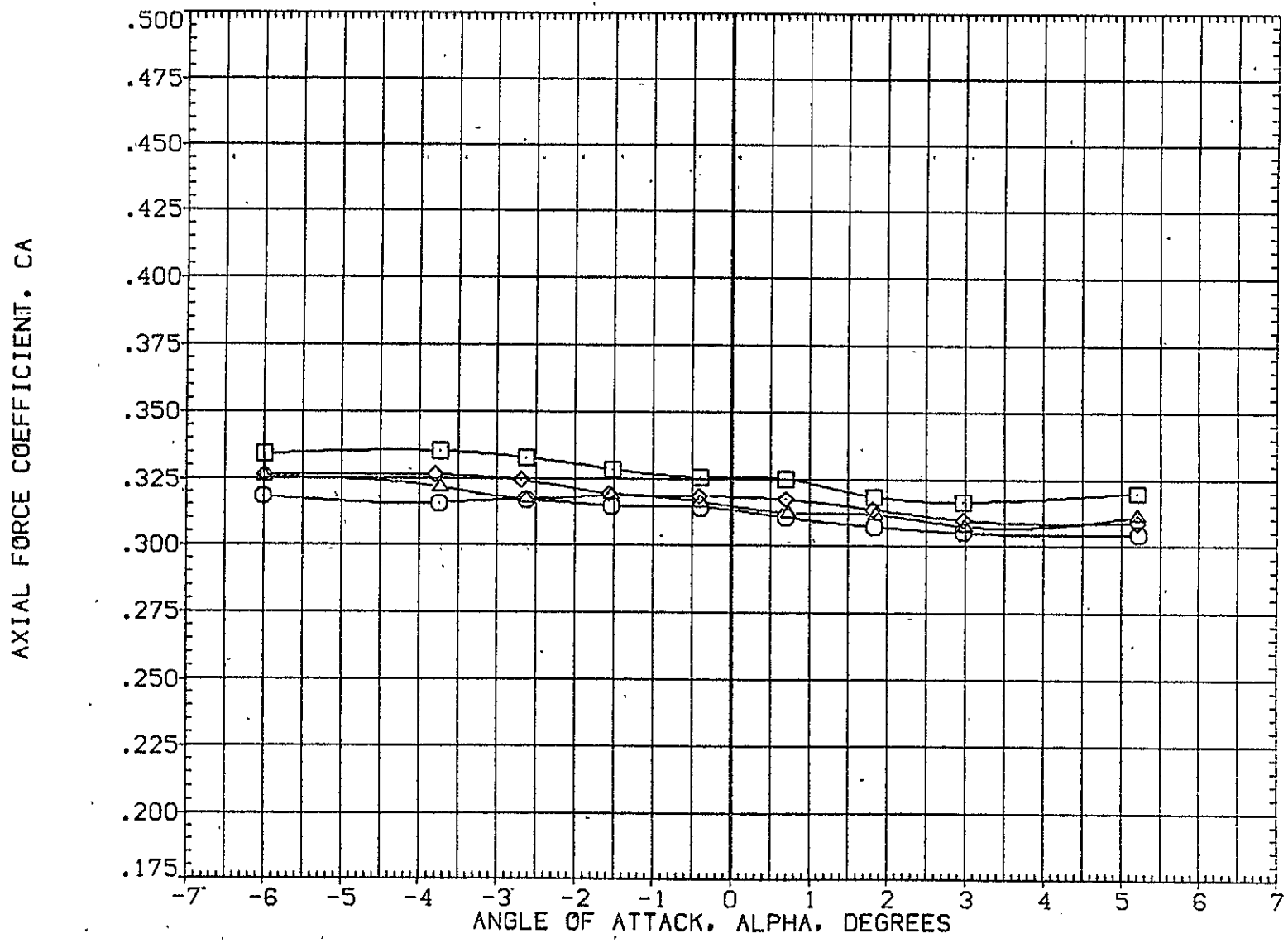


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L001) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003) △	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



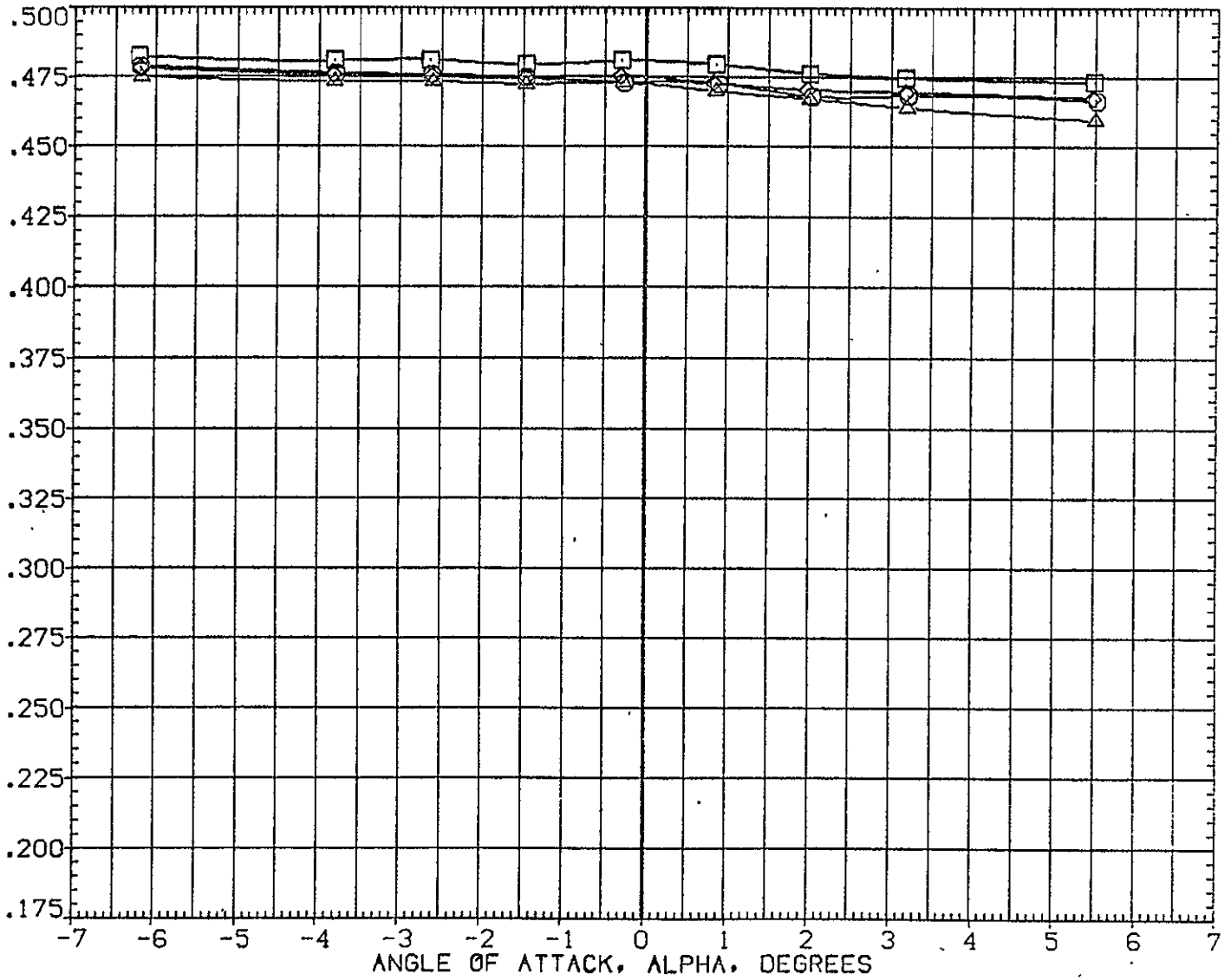
TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L001)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)	⊠	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

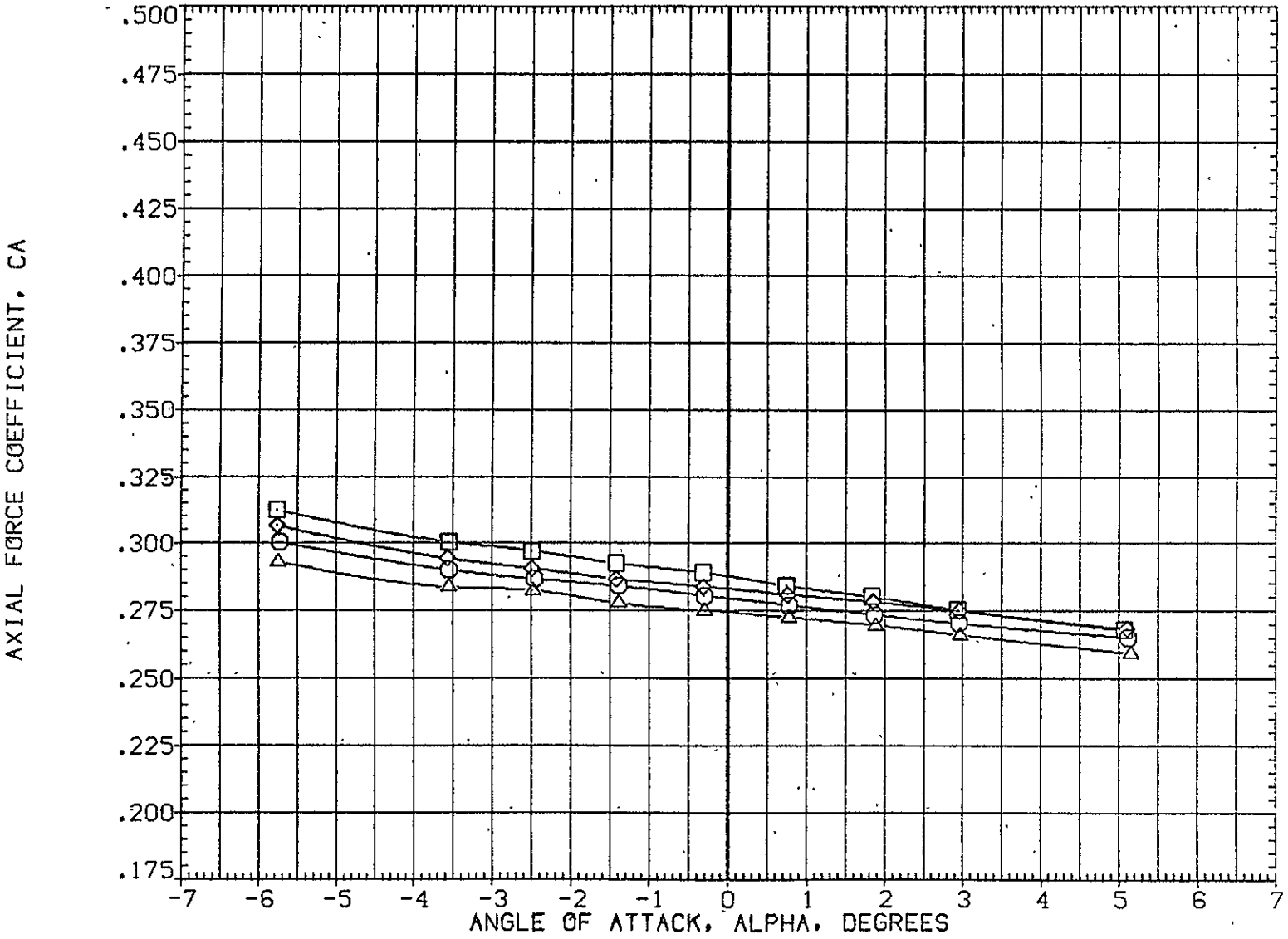


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L001)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

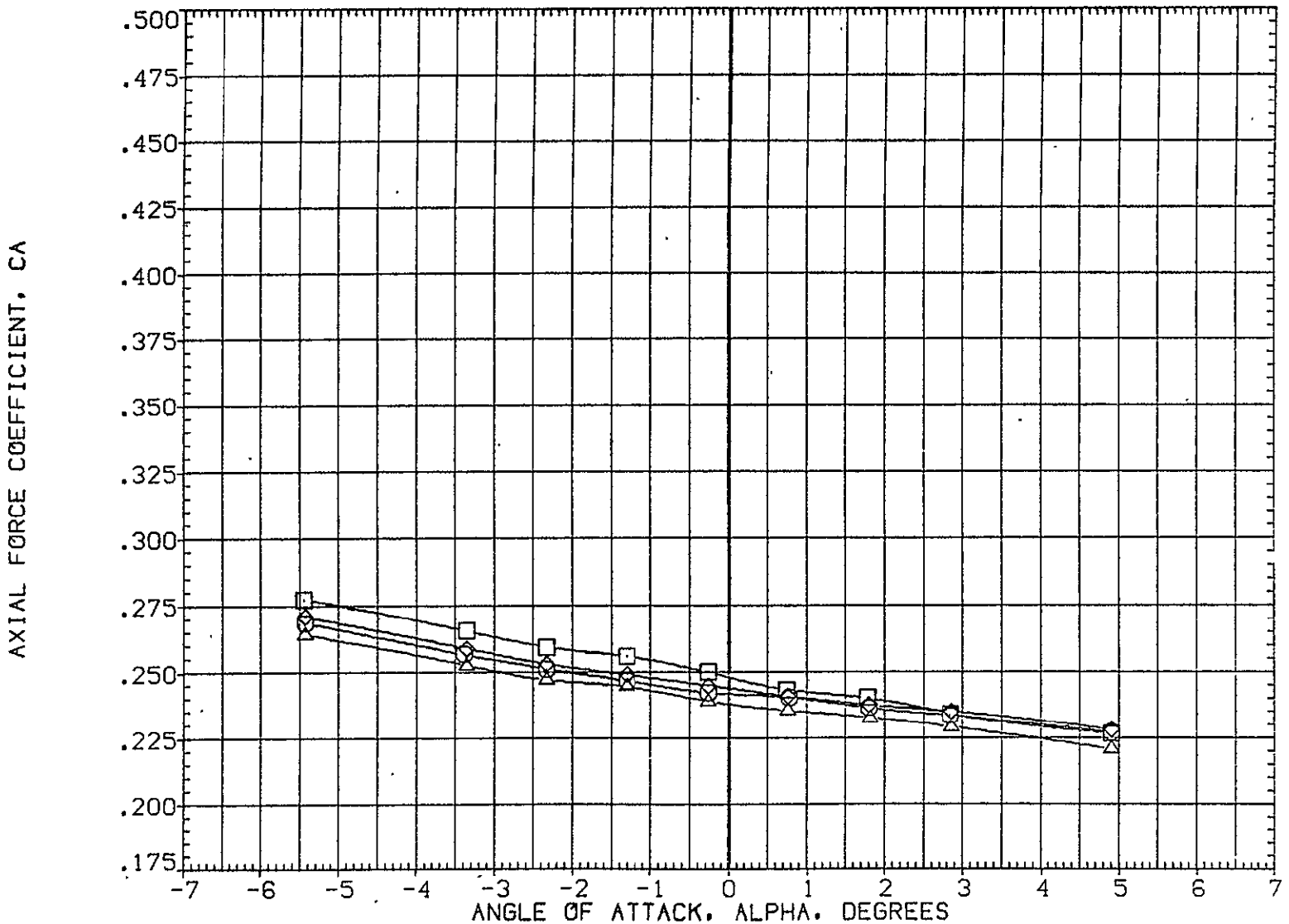


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L001)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F1	.000	.000	90.000	.140
(A1L002)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F2	.000	.000	90.000	.140
(A1L003)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F3	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

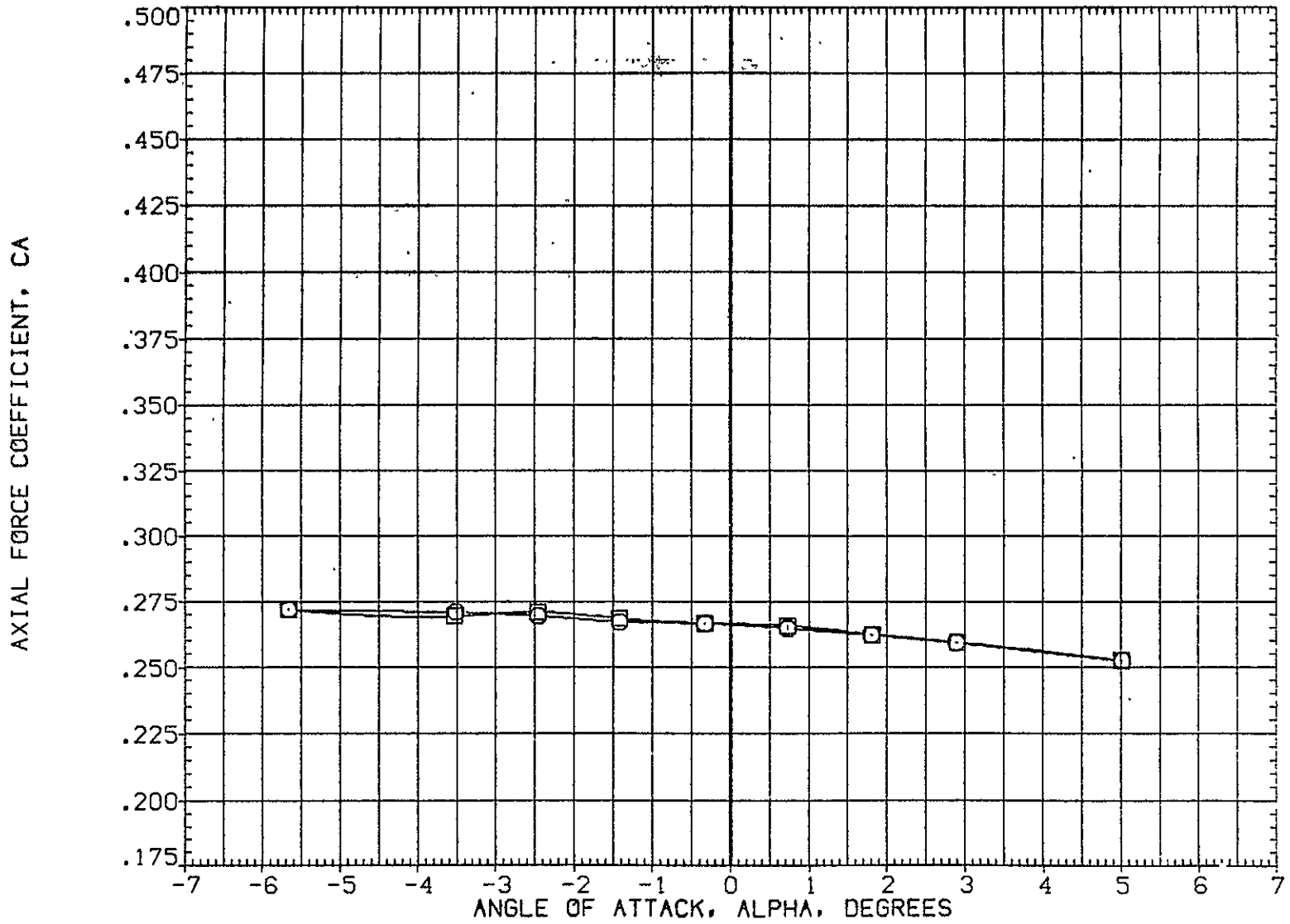


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(C1L004)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L008)	⊠	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	△	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

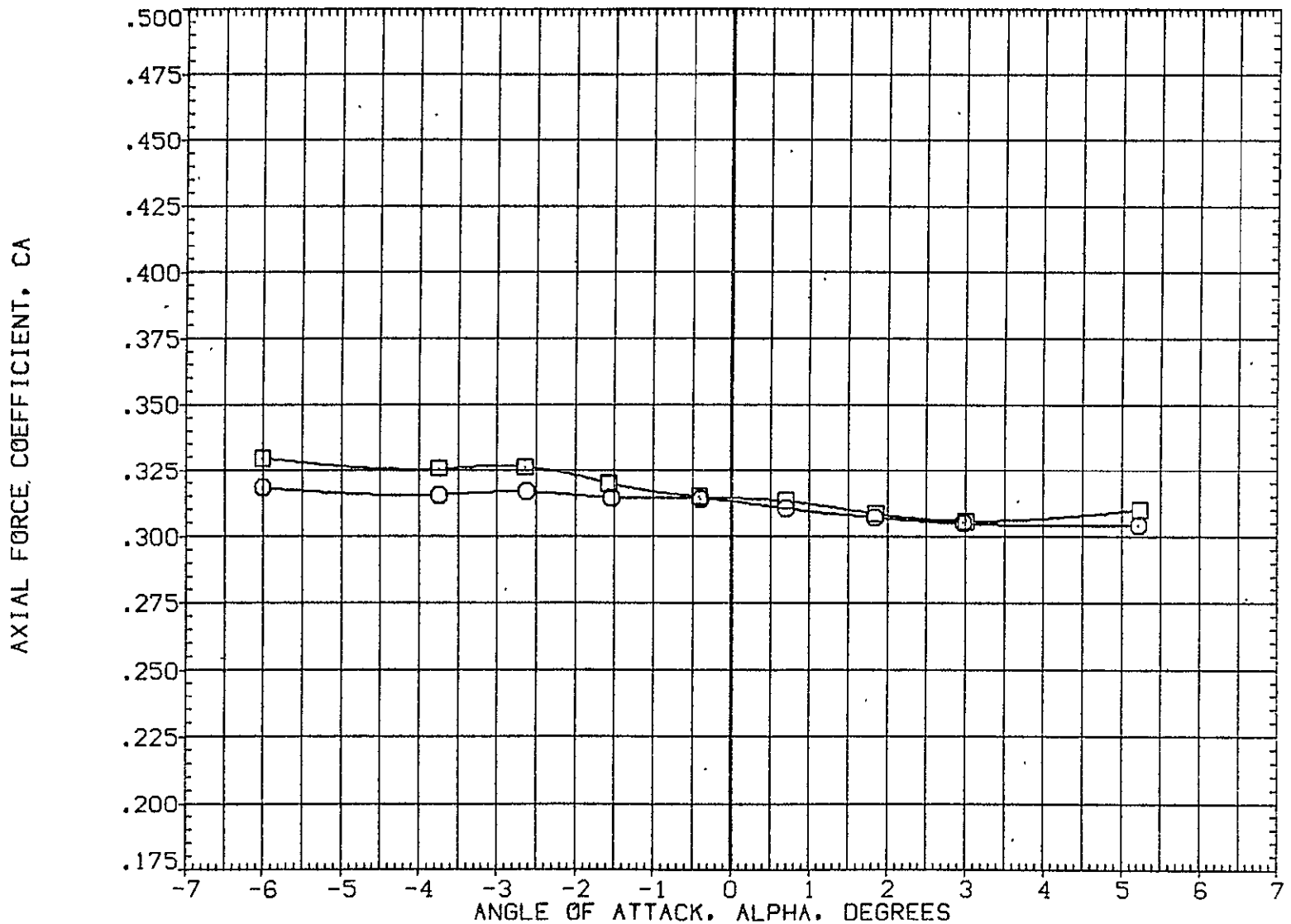


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(C1L004)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L008)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)		DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

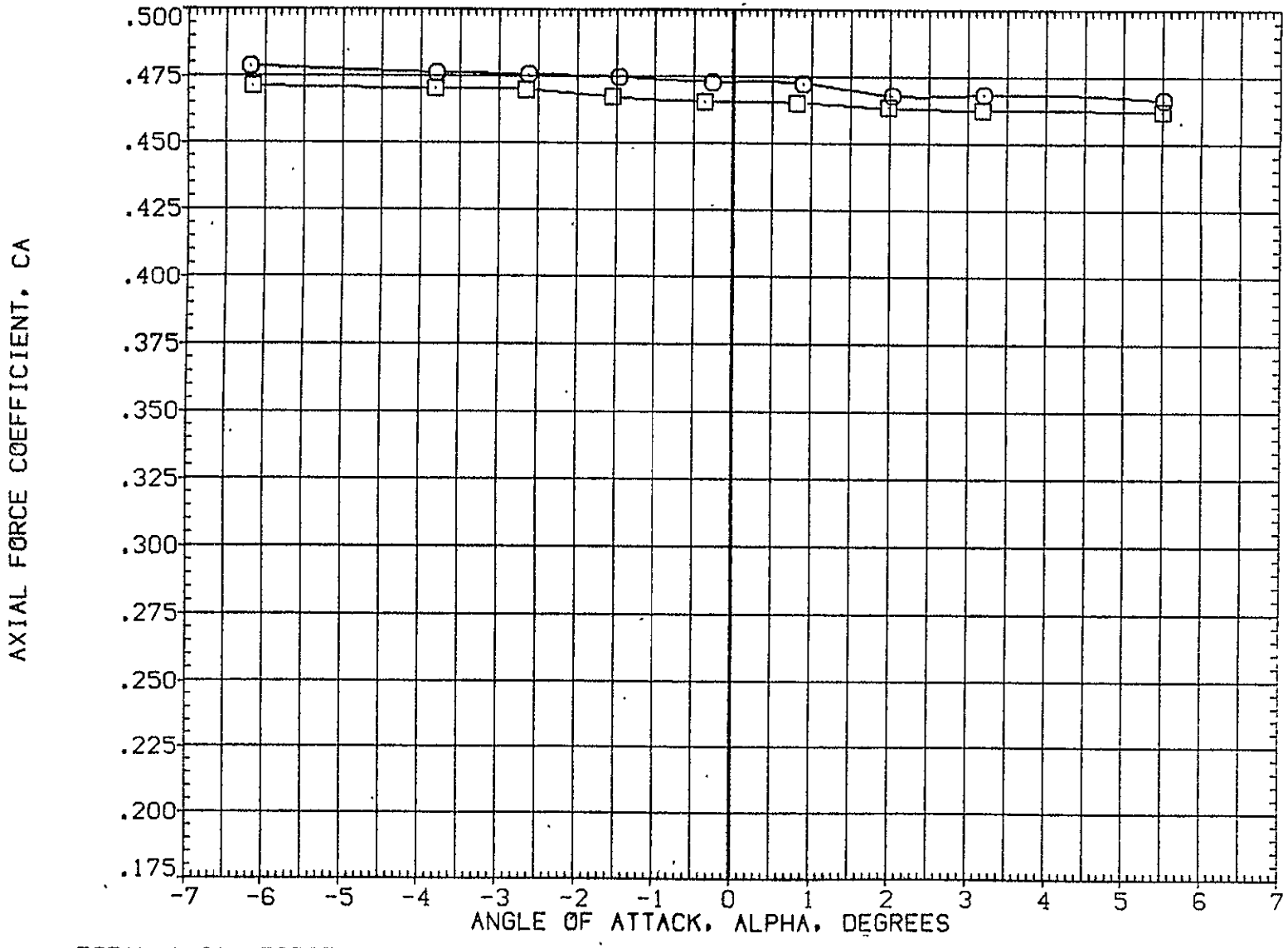


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(C1L004)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L008)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L009)	△	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

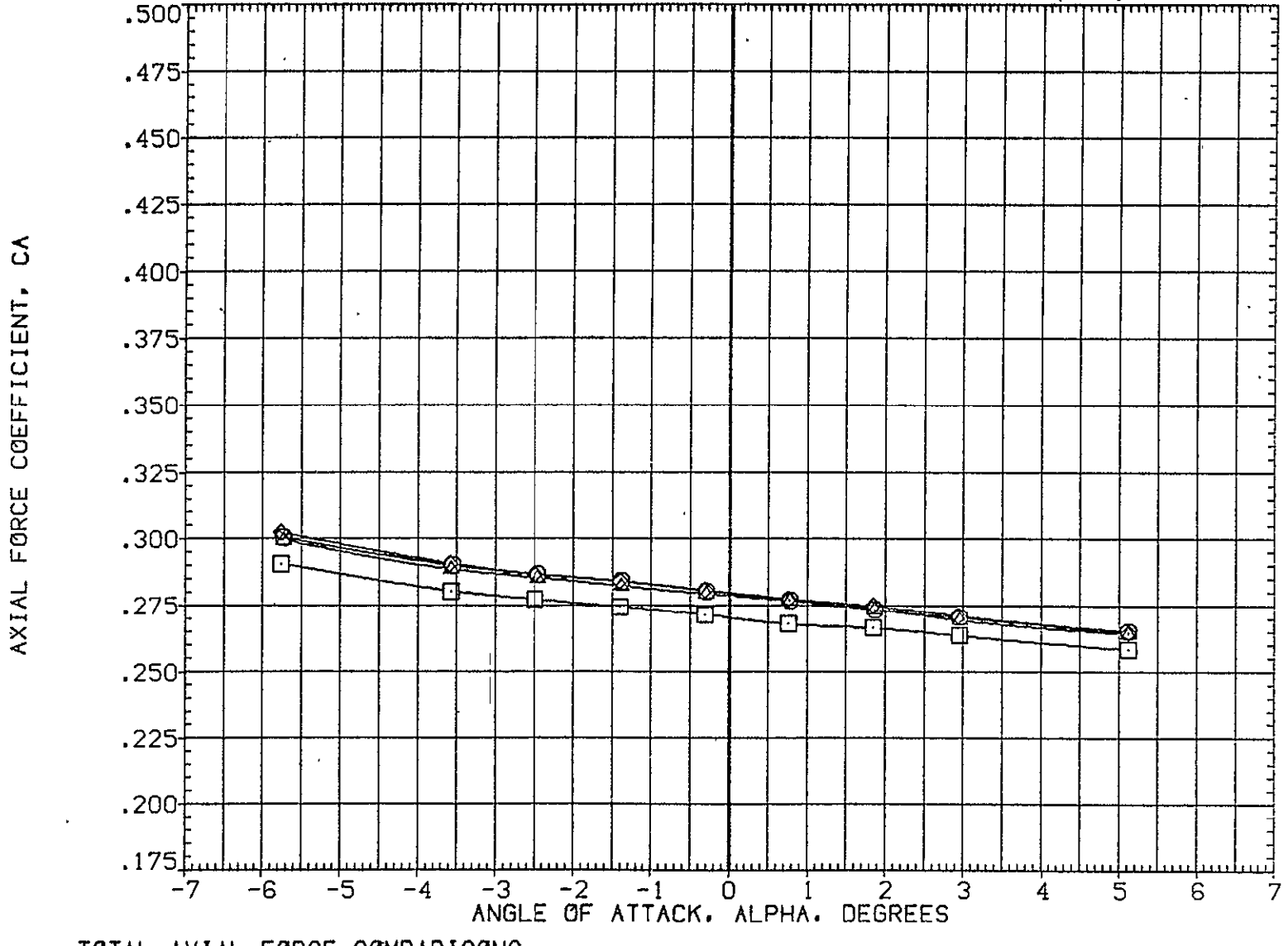


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(C1L004)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L008)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

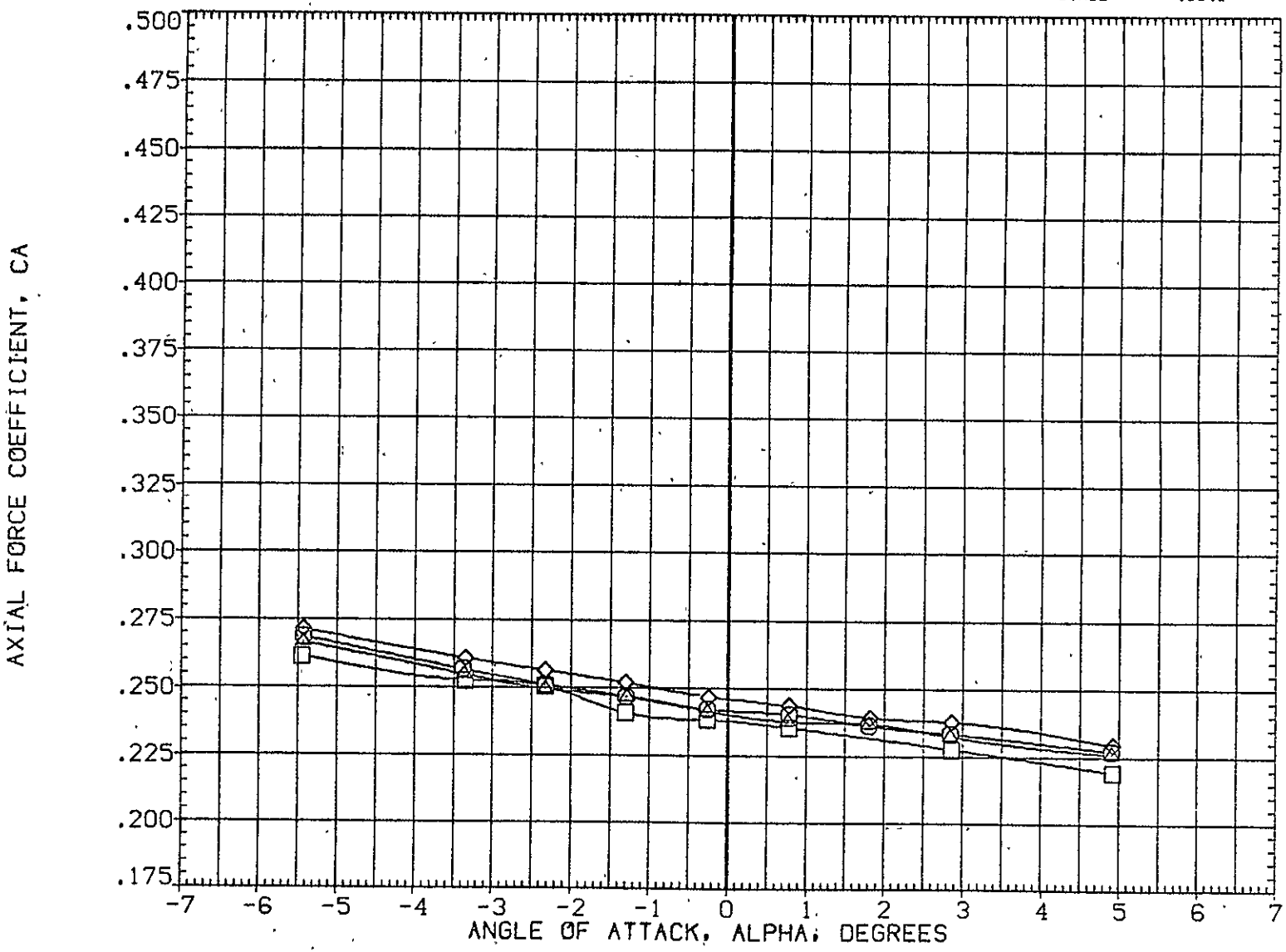


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(C1L004)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F4	.000	.000	90.000	.140
(A1L008)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F8	.000	.000	90.000	.140
(A1L009)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F9	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

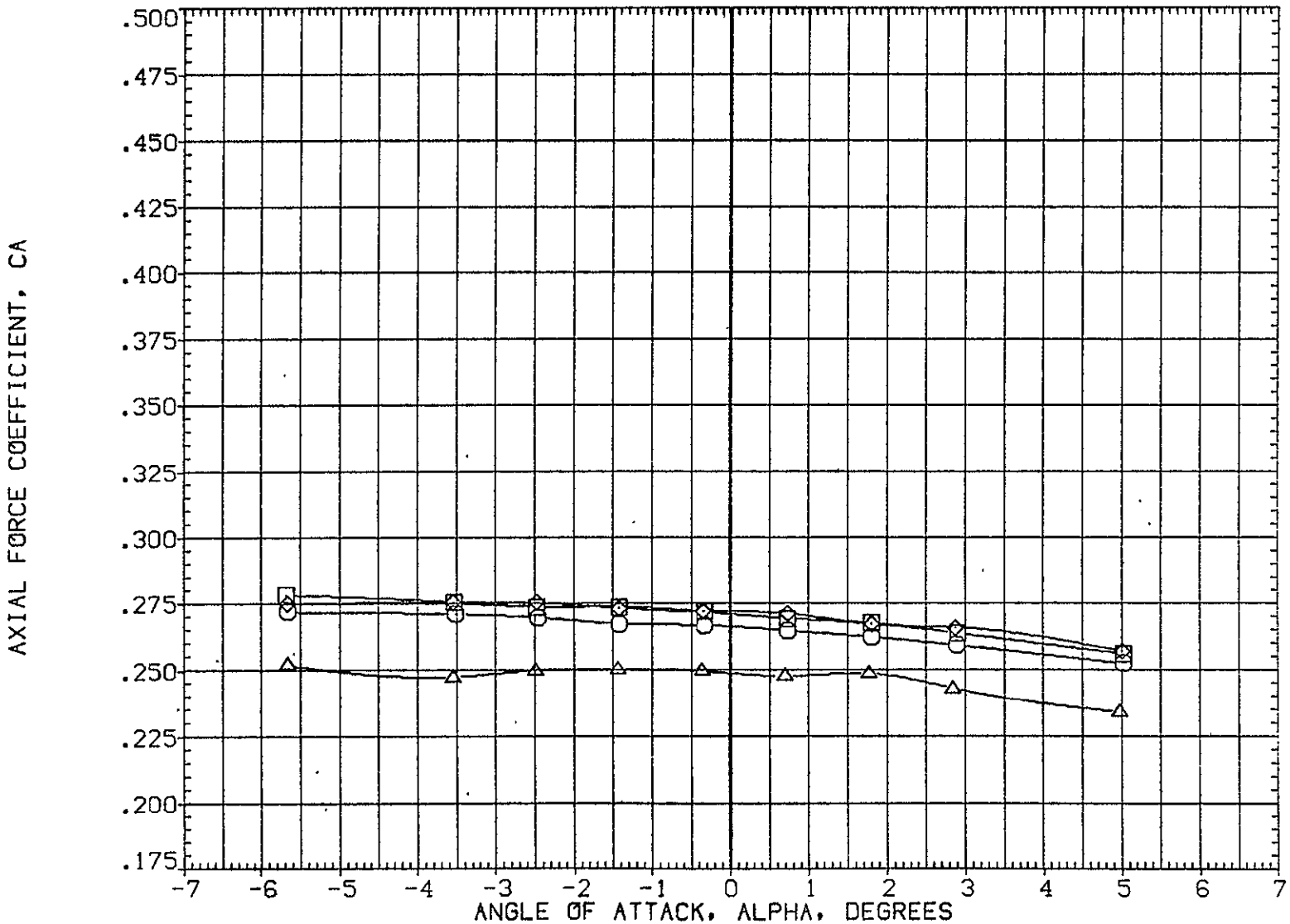


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(AILO05)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(AILO06)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140
(AILO07)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

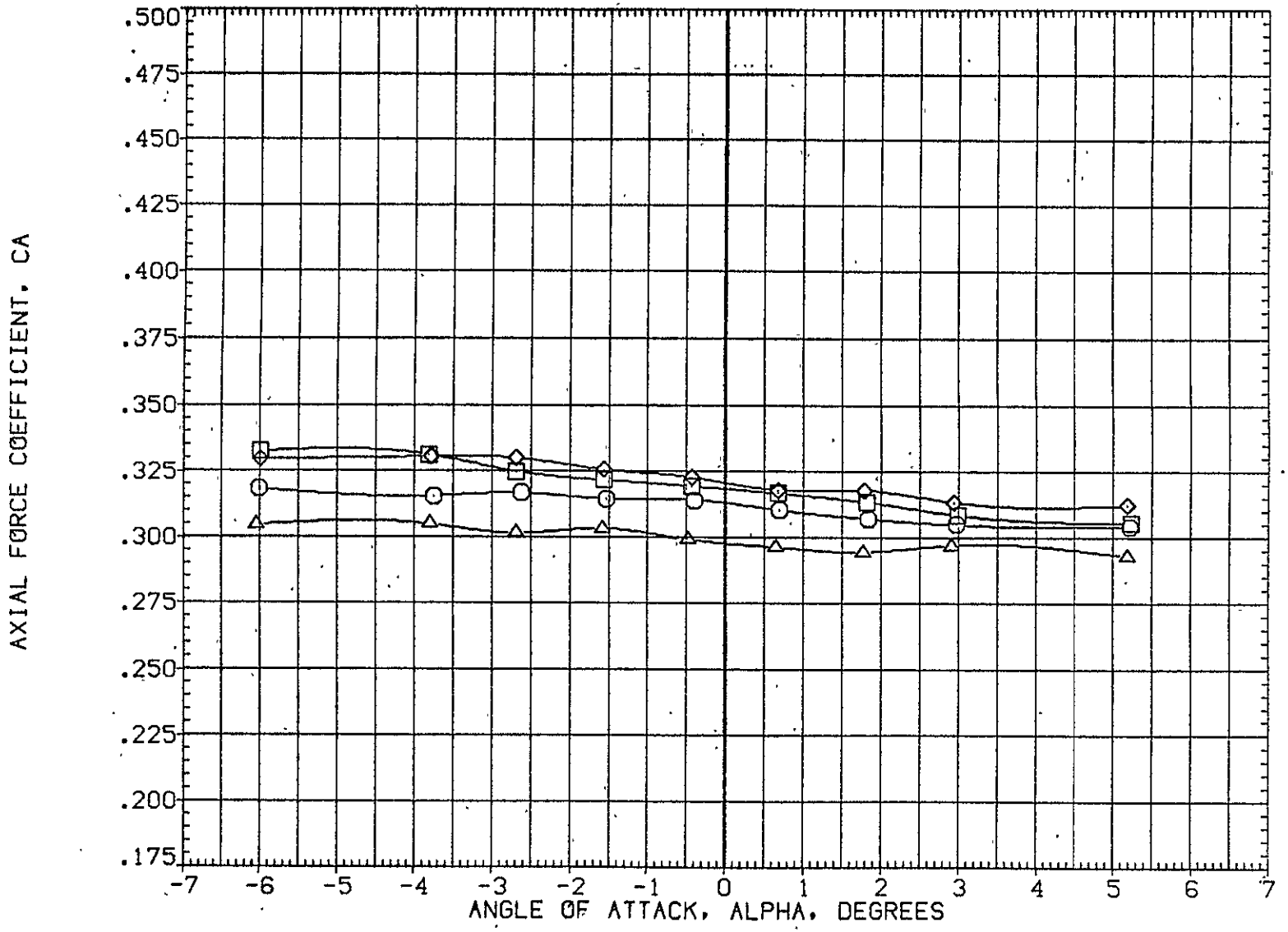


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140
(A1L007)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

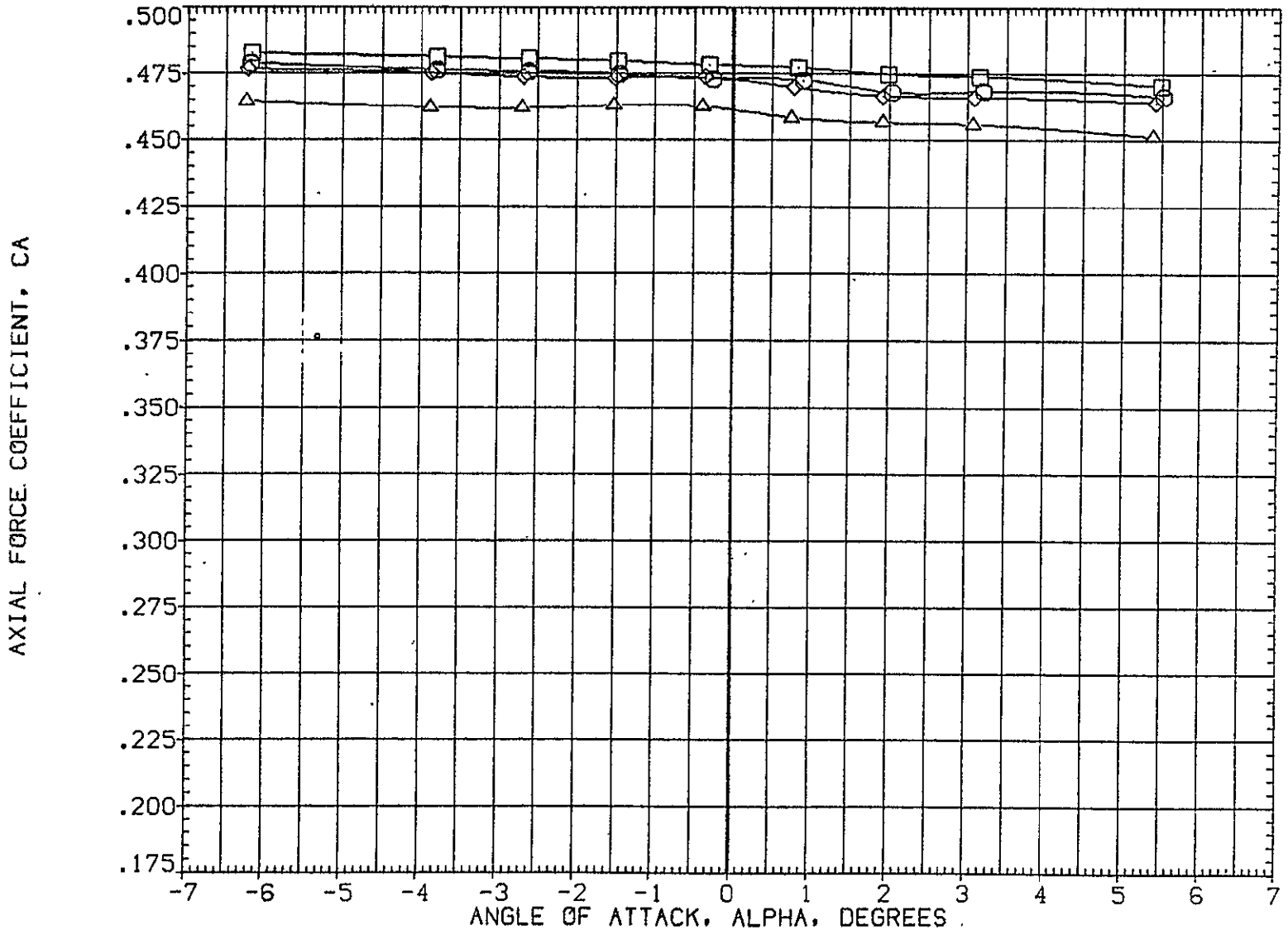


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L005)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140
(A1L007)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

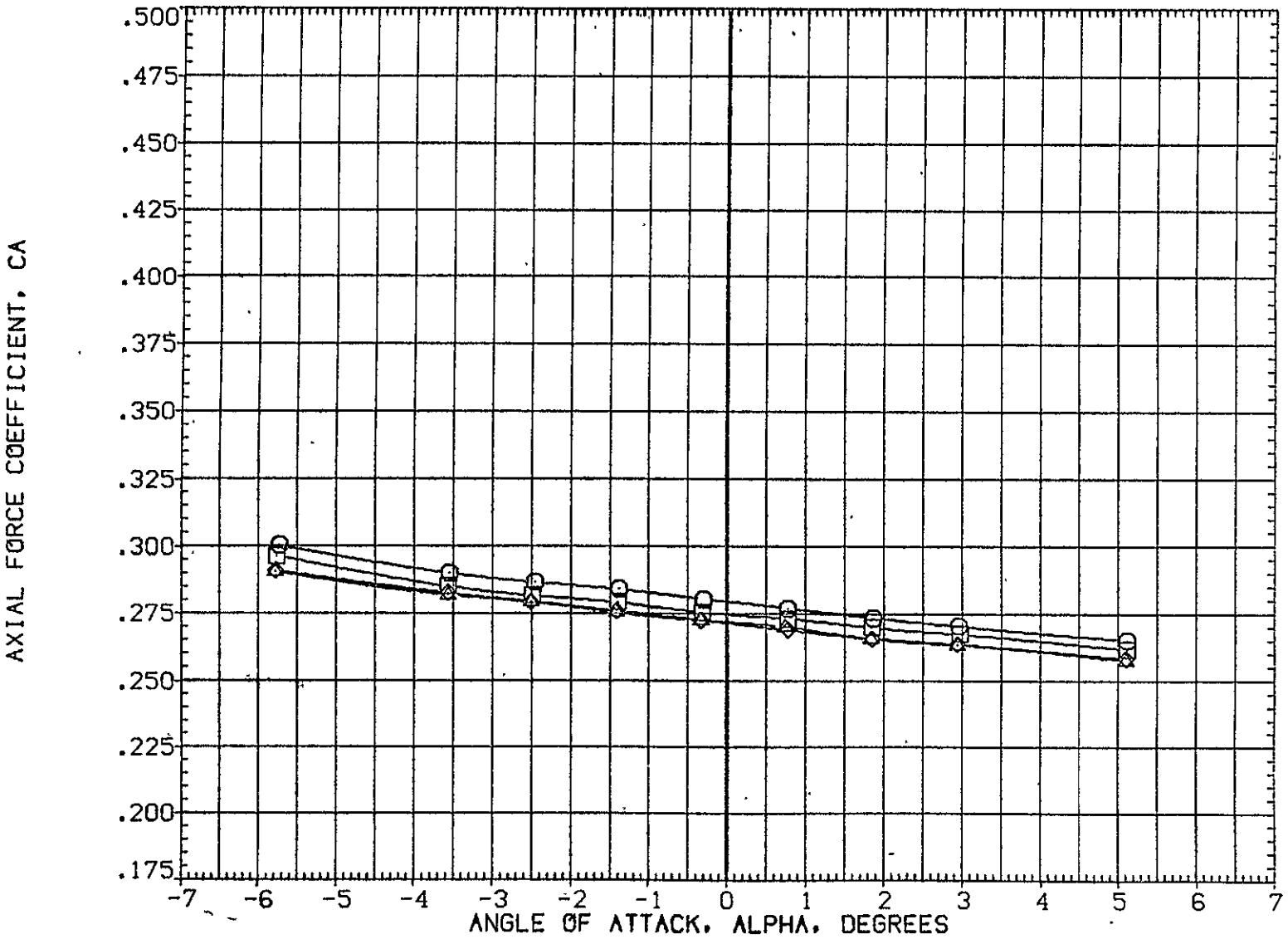


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L005)	▣	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140
(A1L007)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

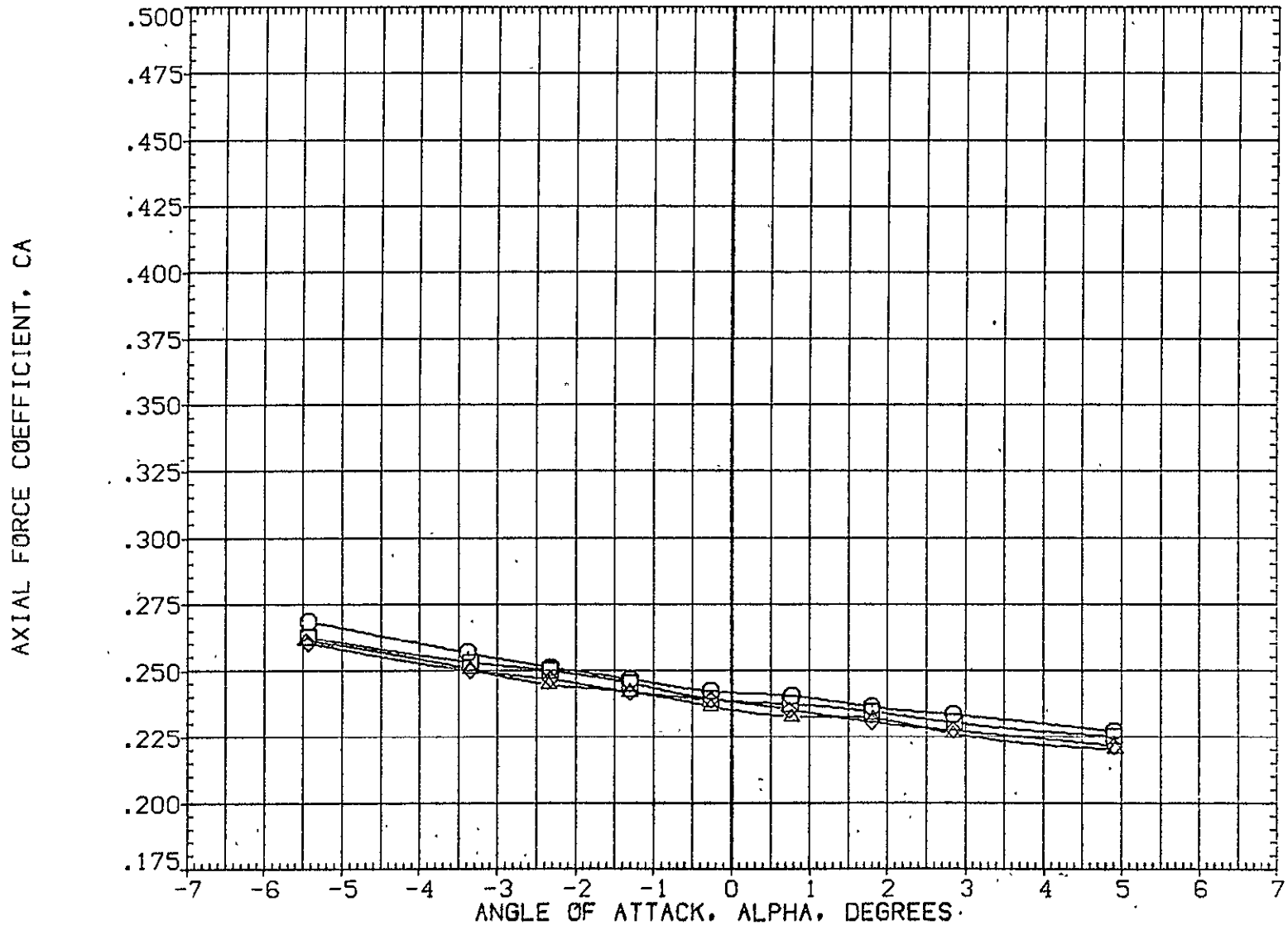


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L005)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F5	.000	.000	90.000	.140
(A1L006)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F6	.000	.000	90.000	.140
(A1L007)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F7	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

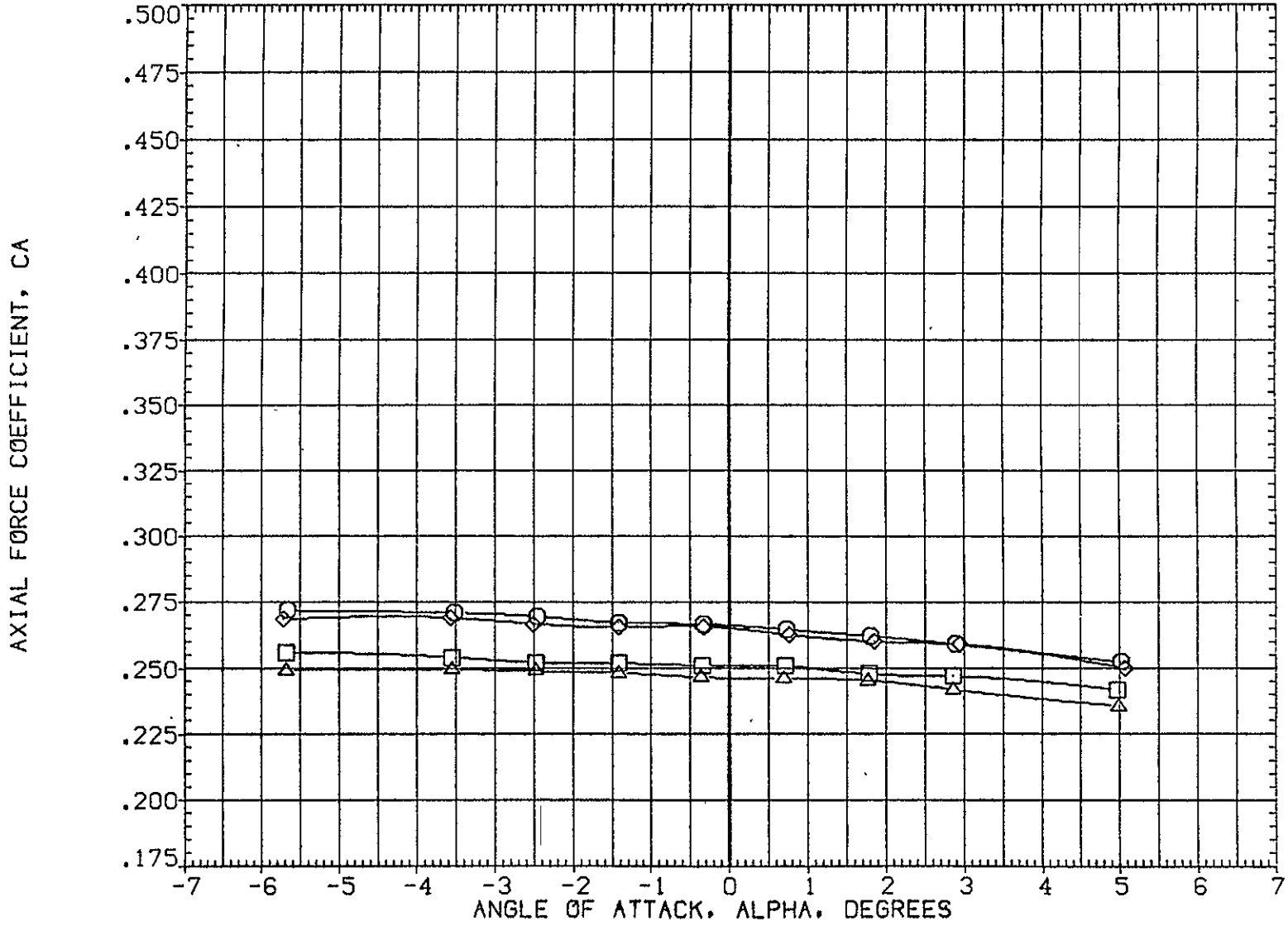


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16) ○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO10) □	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1LO11) ◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1LO12) △	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

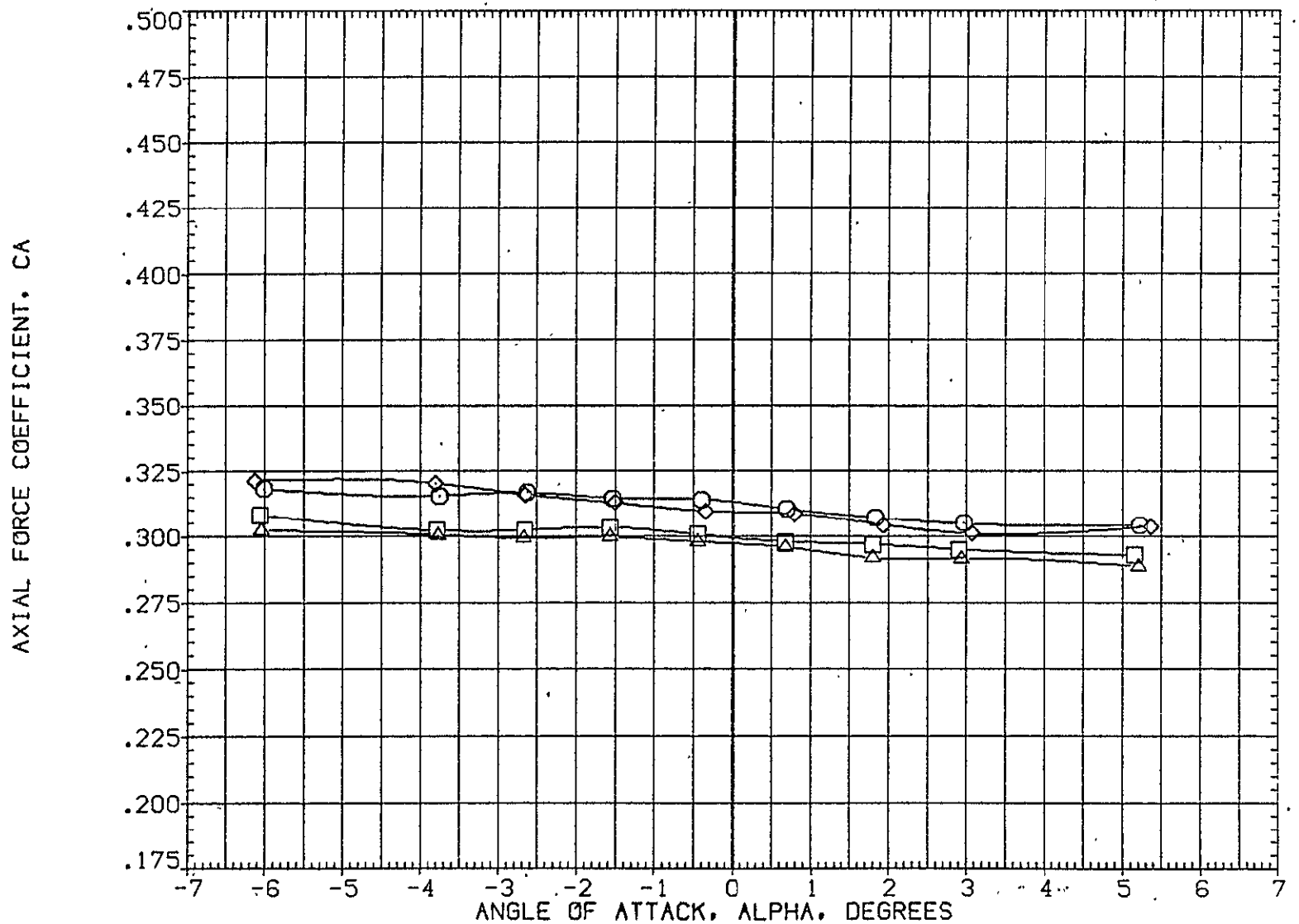


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)	▢	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO10)	▢	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1LO11)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1LO12)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

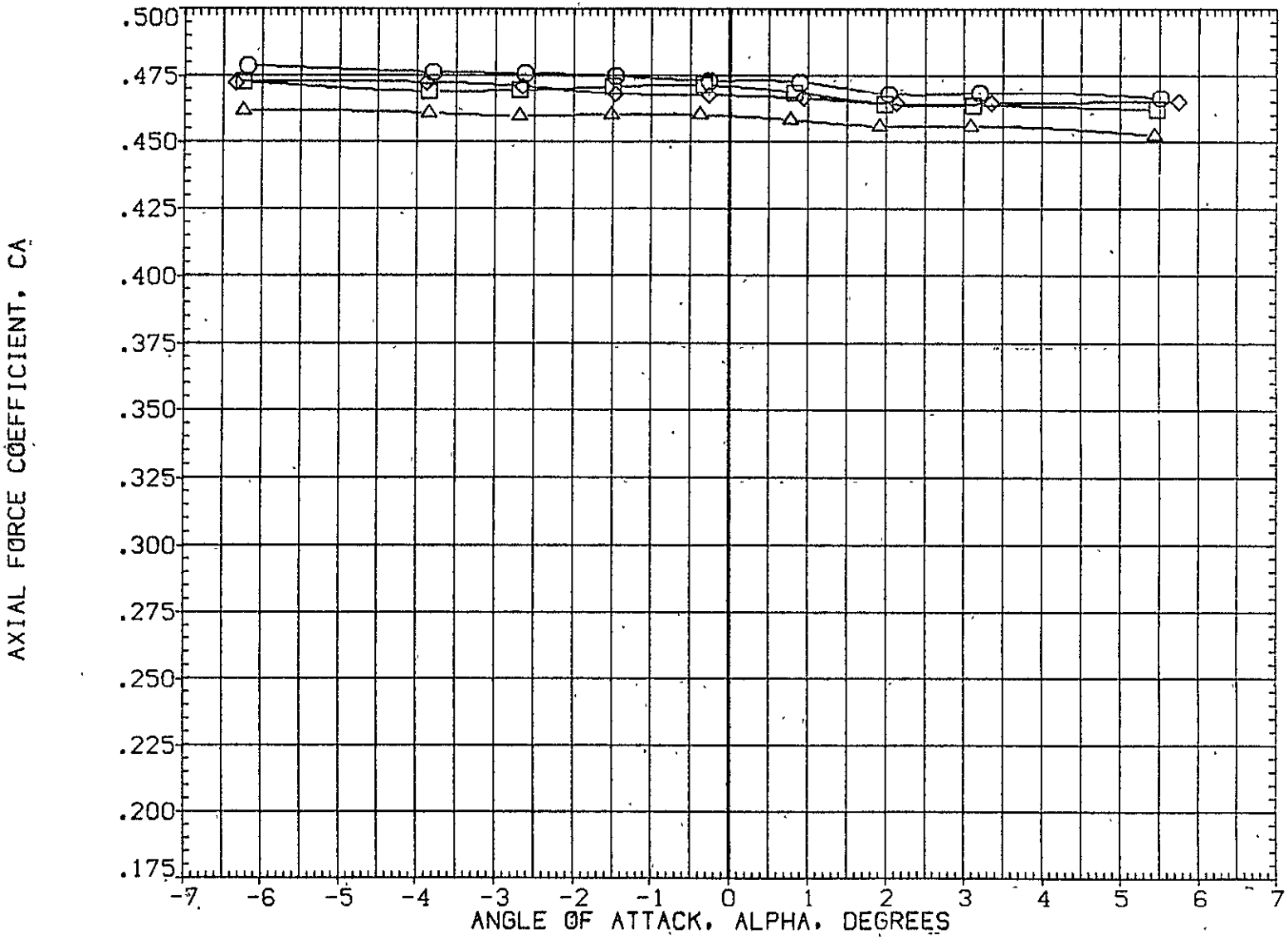


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01TISIAIRIK1	.000	.000	90.000	.140
(AILO10)	□	MSFC TWT 600 (FA14)	01TISIAIRIKIF10	.000	.000	90.000	.140
(AILO11)	◇	MSFC TWT 600 (FA14)	01TISIAIRIKIF11	.000	.000	90.000	.140
(AILO12)	△	MSFC TWT 600 (FA14)	01TISIAIRIKIF12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

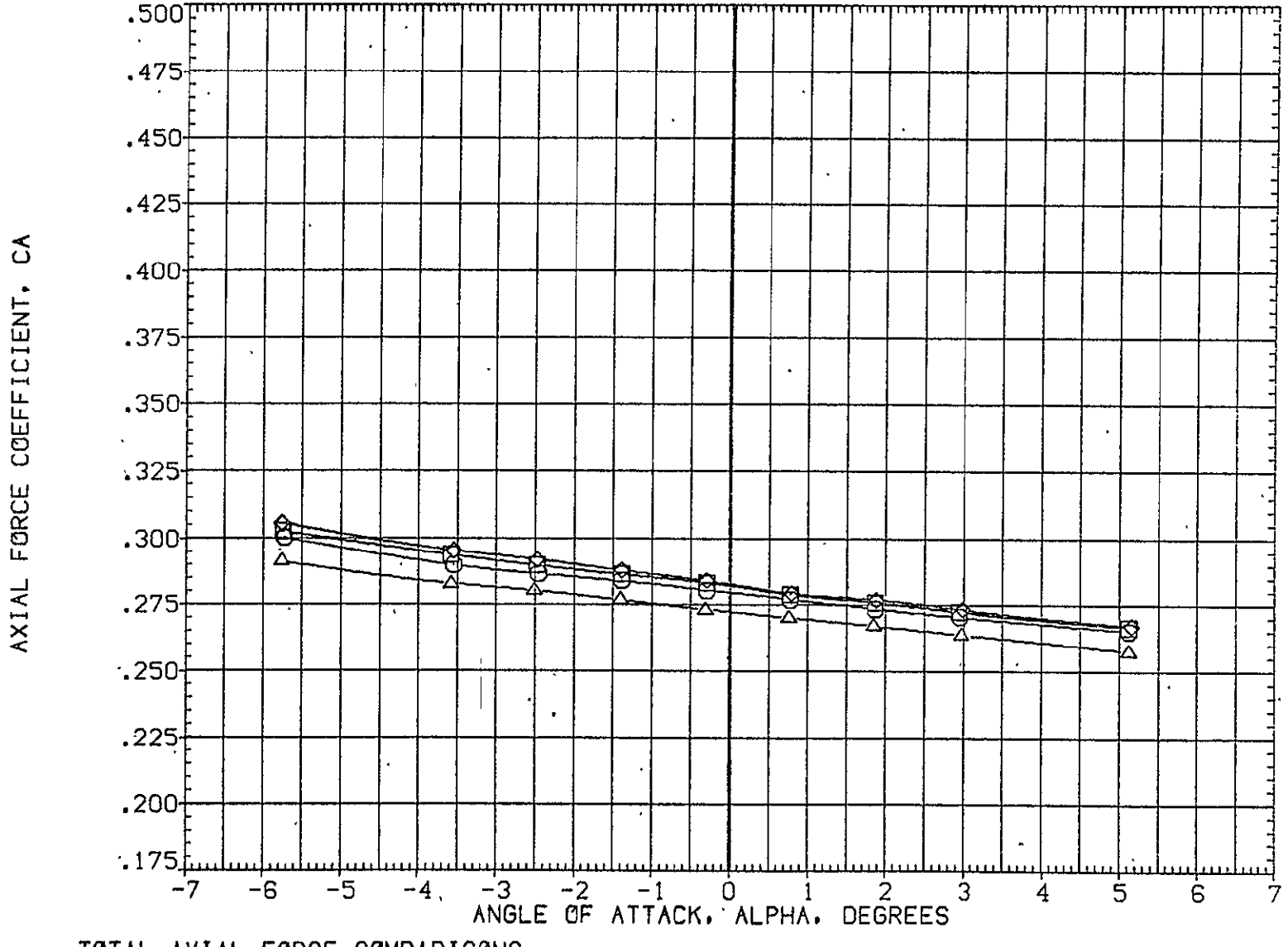


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L010)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1L011)	⊠	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1L012)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

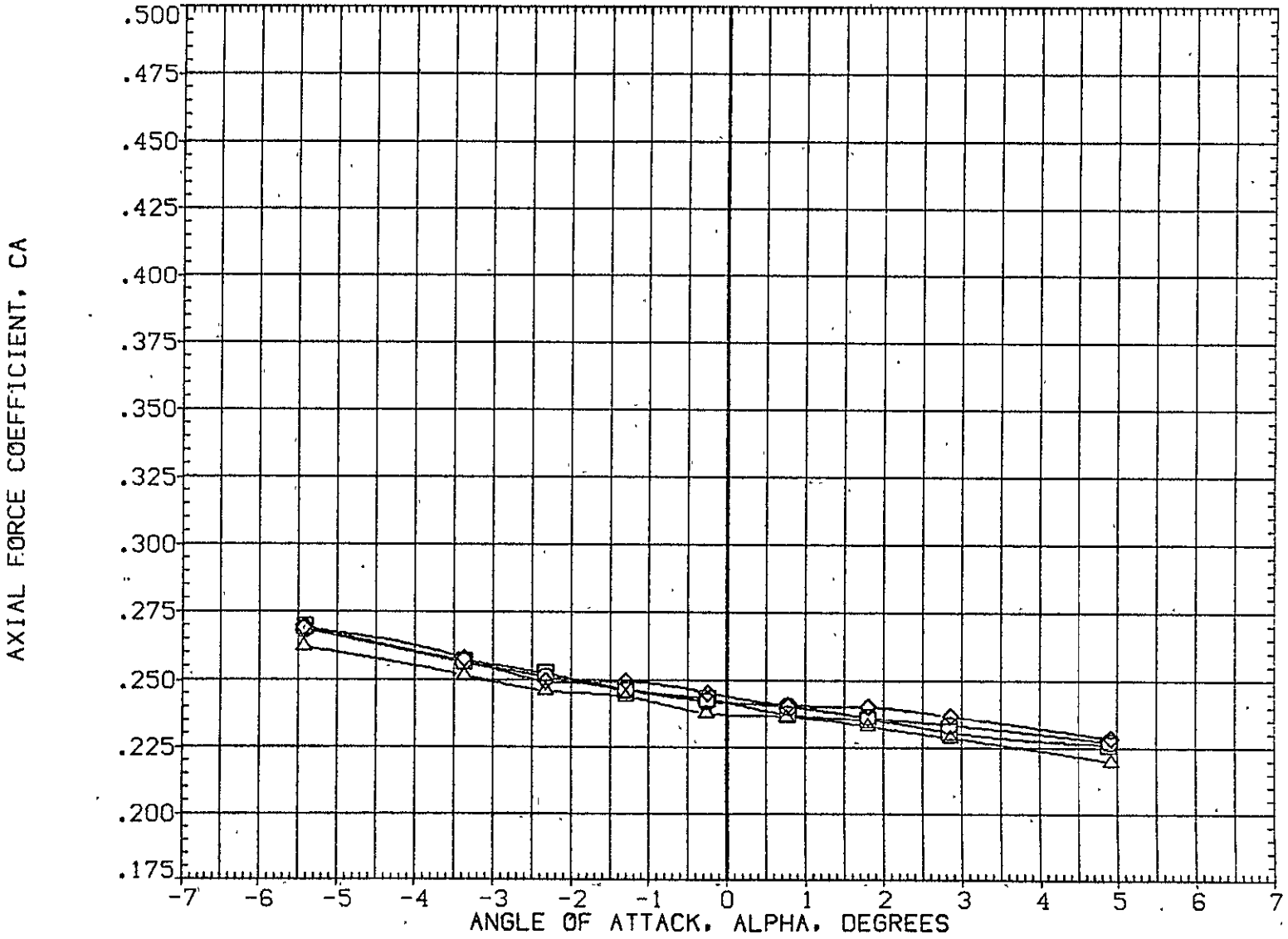


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO10)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10	.000	.000	90.000	.140
(A1LO11)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F11	.000	.000	90.000	.140
(A1LO12)	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

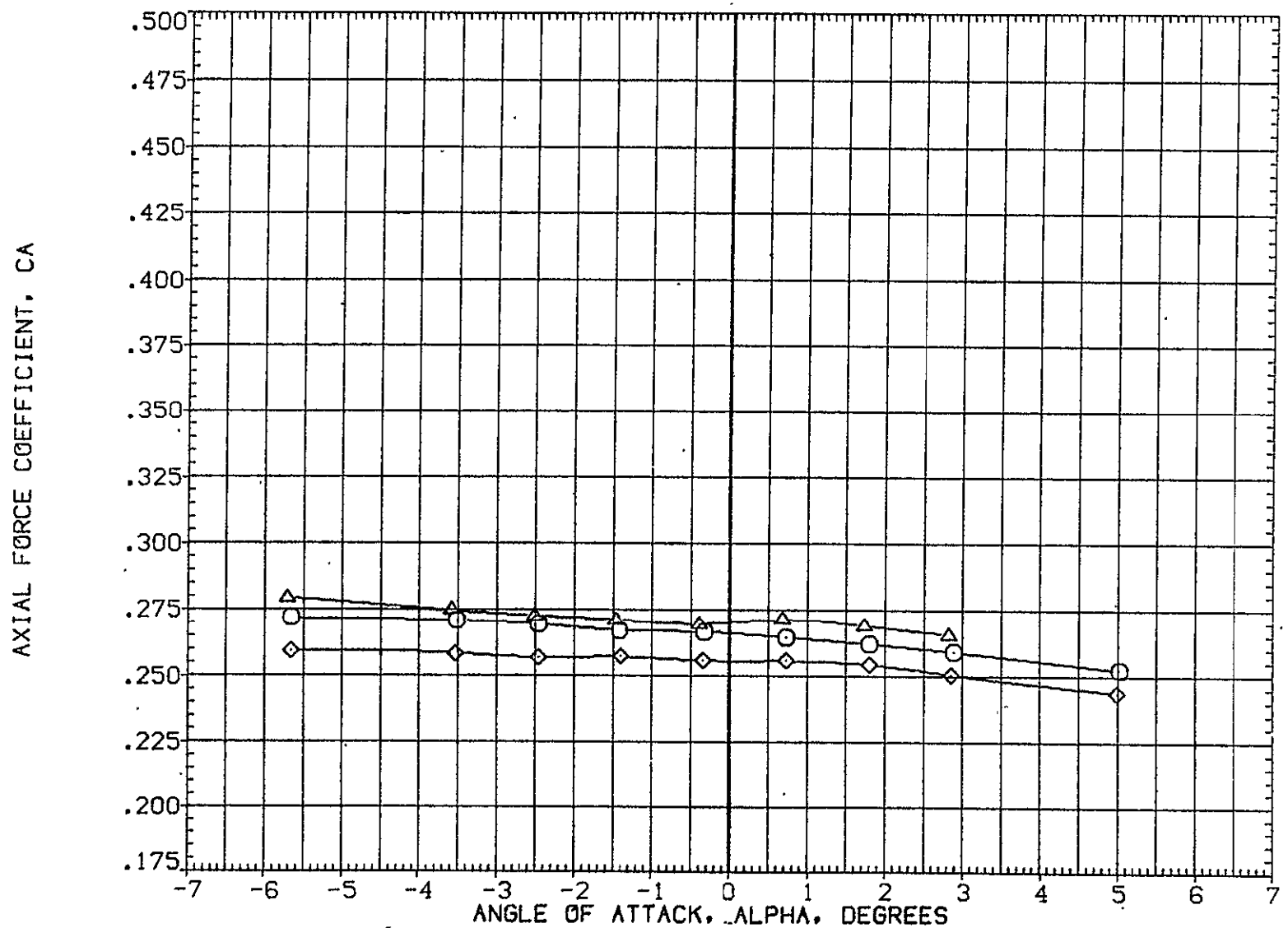


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO13)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1LO14)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1LO15)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.F
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

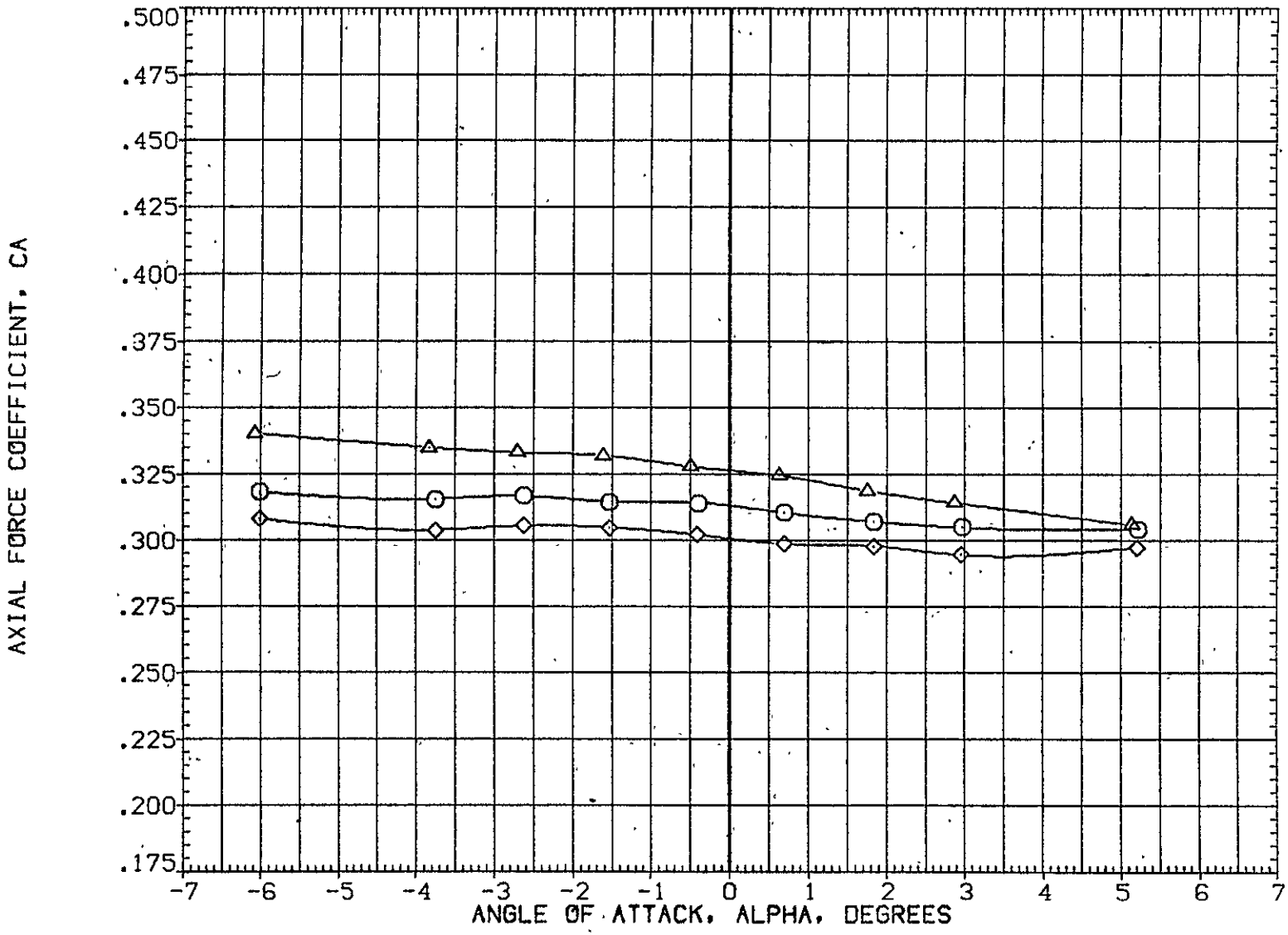


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO13)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1LO14)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1LO15)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

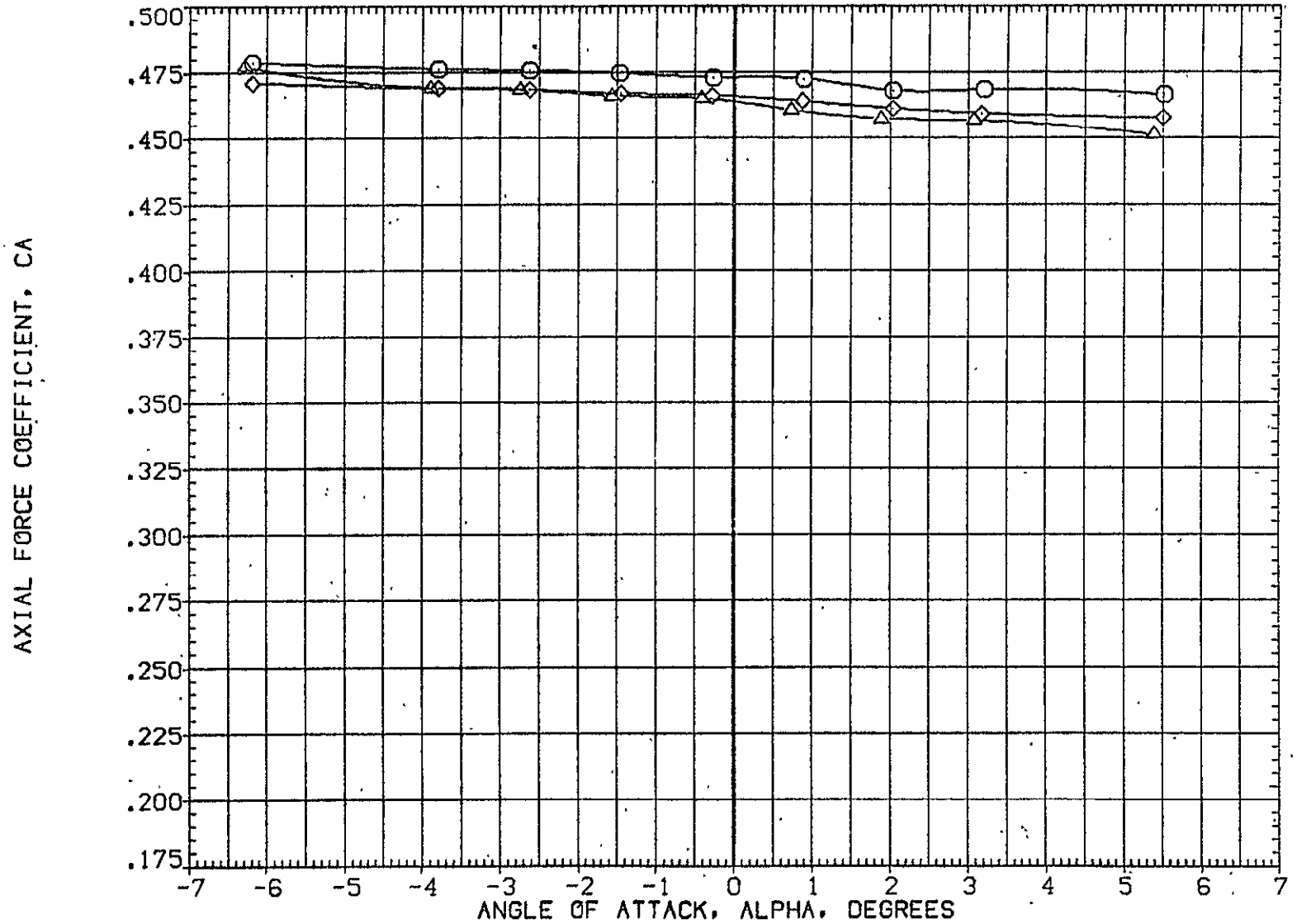


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1LO13)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1LO14)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1LO15)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

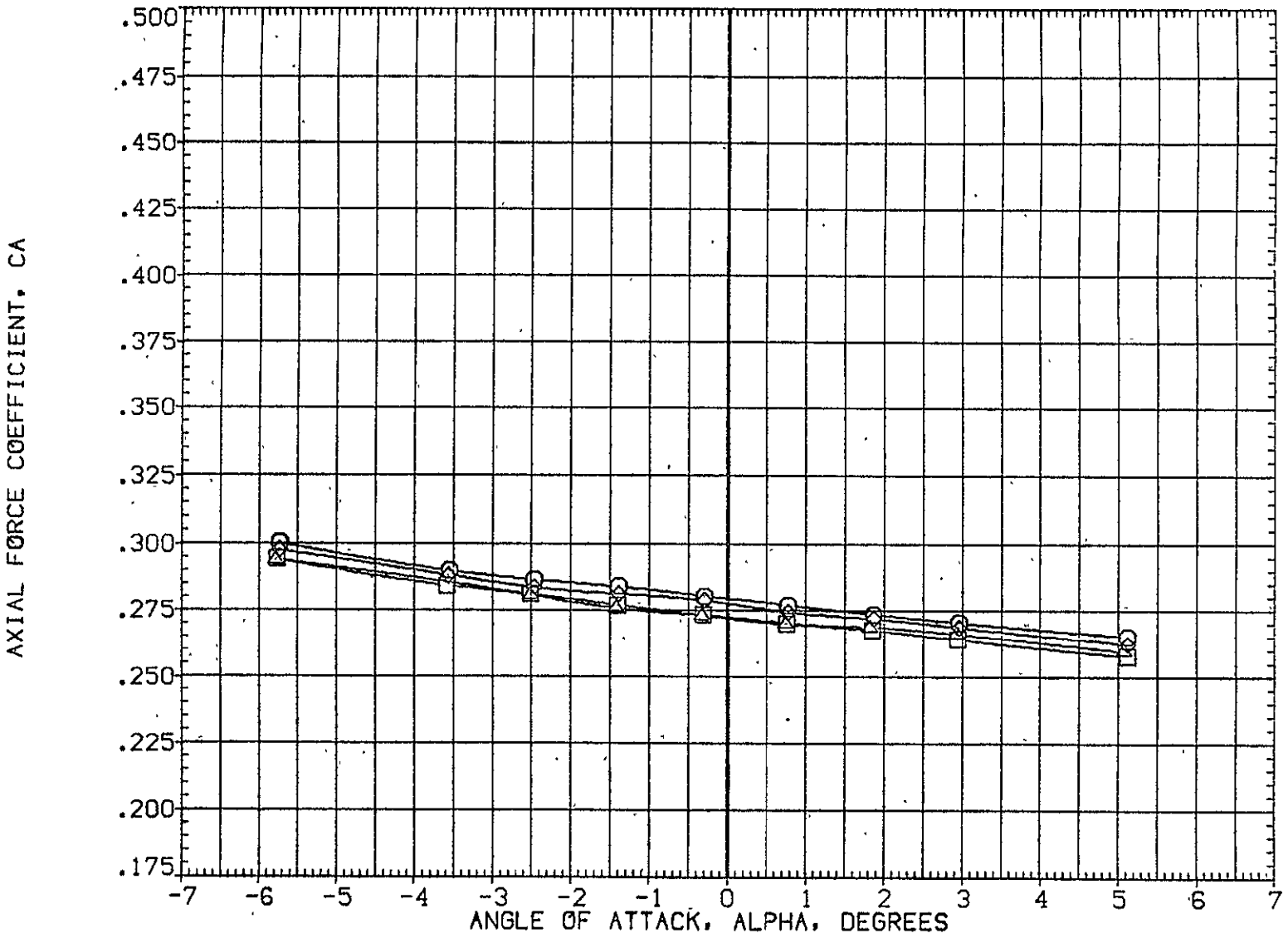


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L013)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F13	.000	.000	90.000	.140
(A1L014)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F14	.000	.000	90.000	.140
(A1L015)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

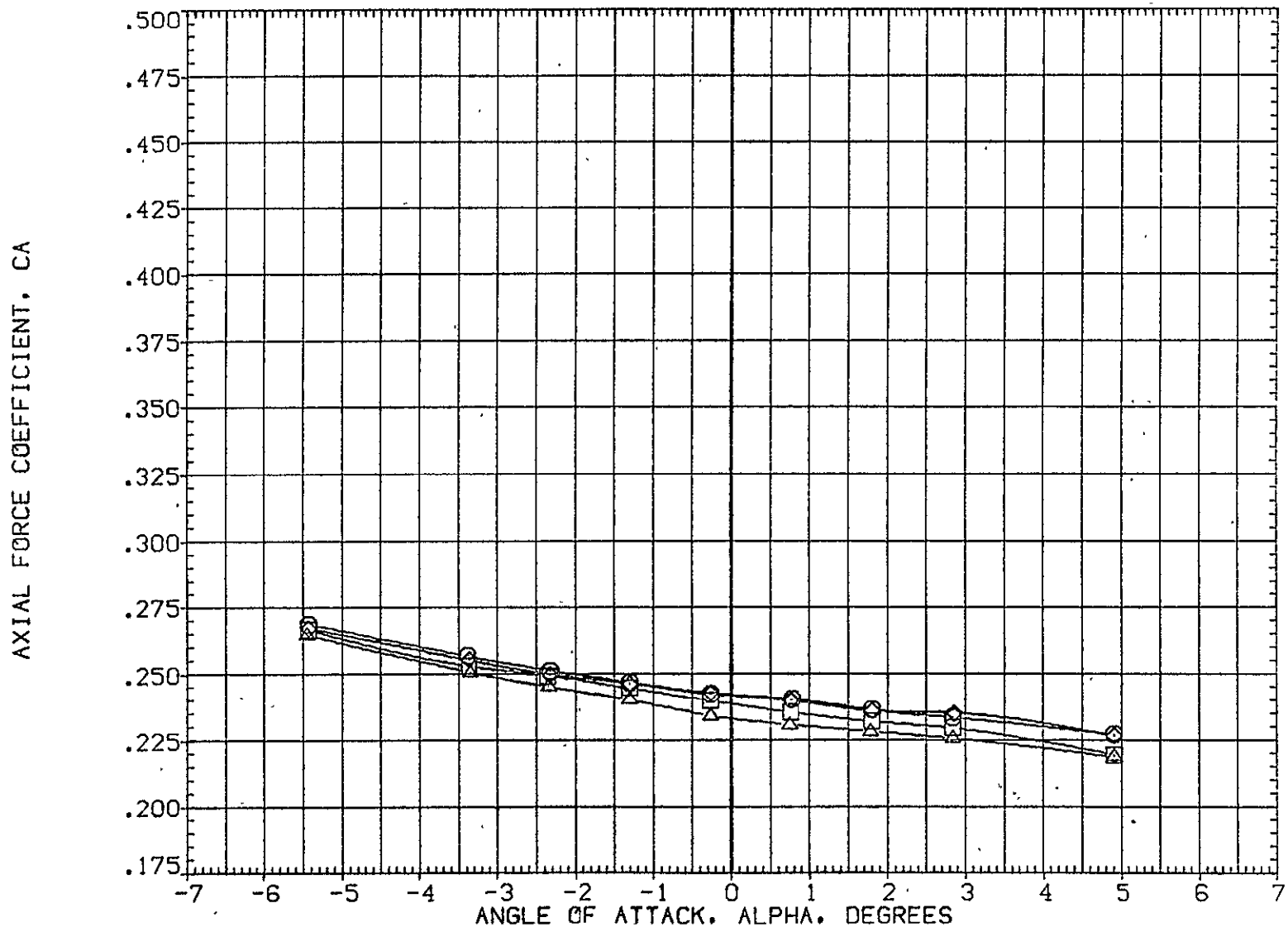


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	MSFC TWT 600 (FA14)	01TIS1A1R1K1	.000	.000	90.000	.140
(AILO13)	MSFC TWT 600 (FA14)	01TIS1A1R1K1F13	.000	.000	90.000	.140
(AILO14)	MSFC TWT 600 (FA14)	01TIS1A1R1K1F14	.000	.000	90.000	.140
(AILO15)	MSFC TWT 600 (FA14)	01TIS1A1R1K1F17	.000	-3.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

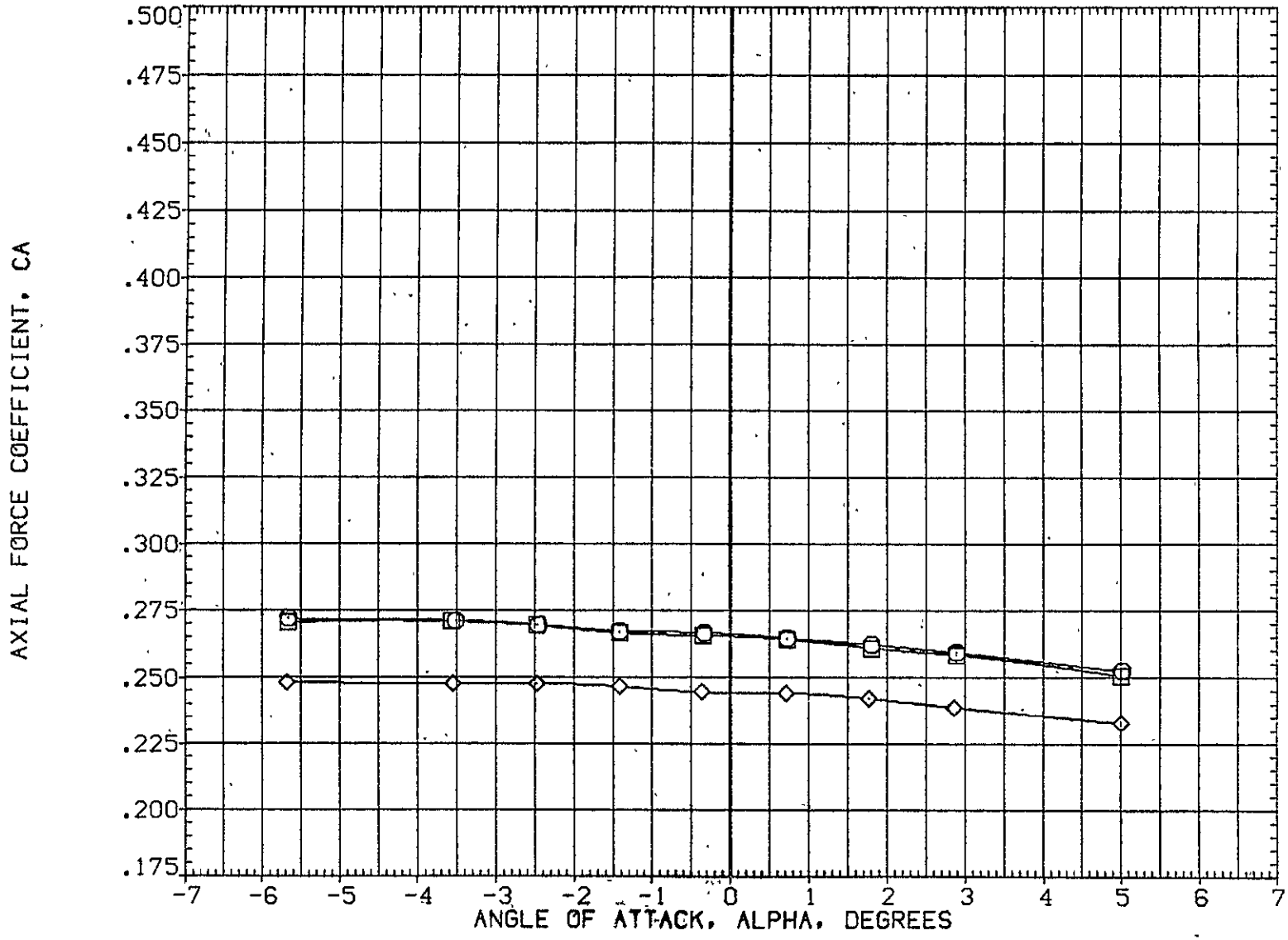


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140
(A1L019)	△	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

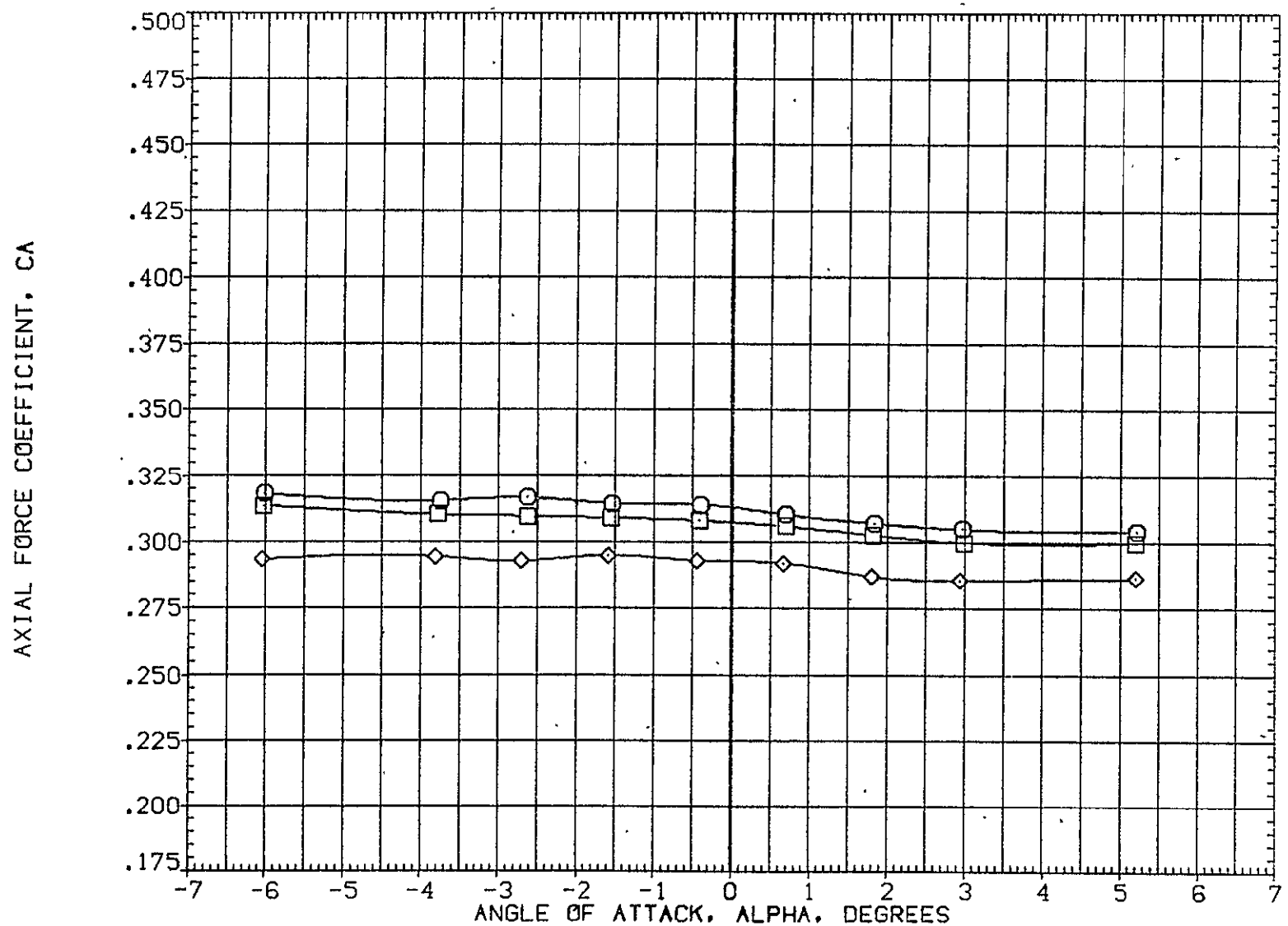


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(AILO17)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(AILO18)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140
(AILO19)	△	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

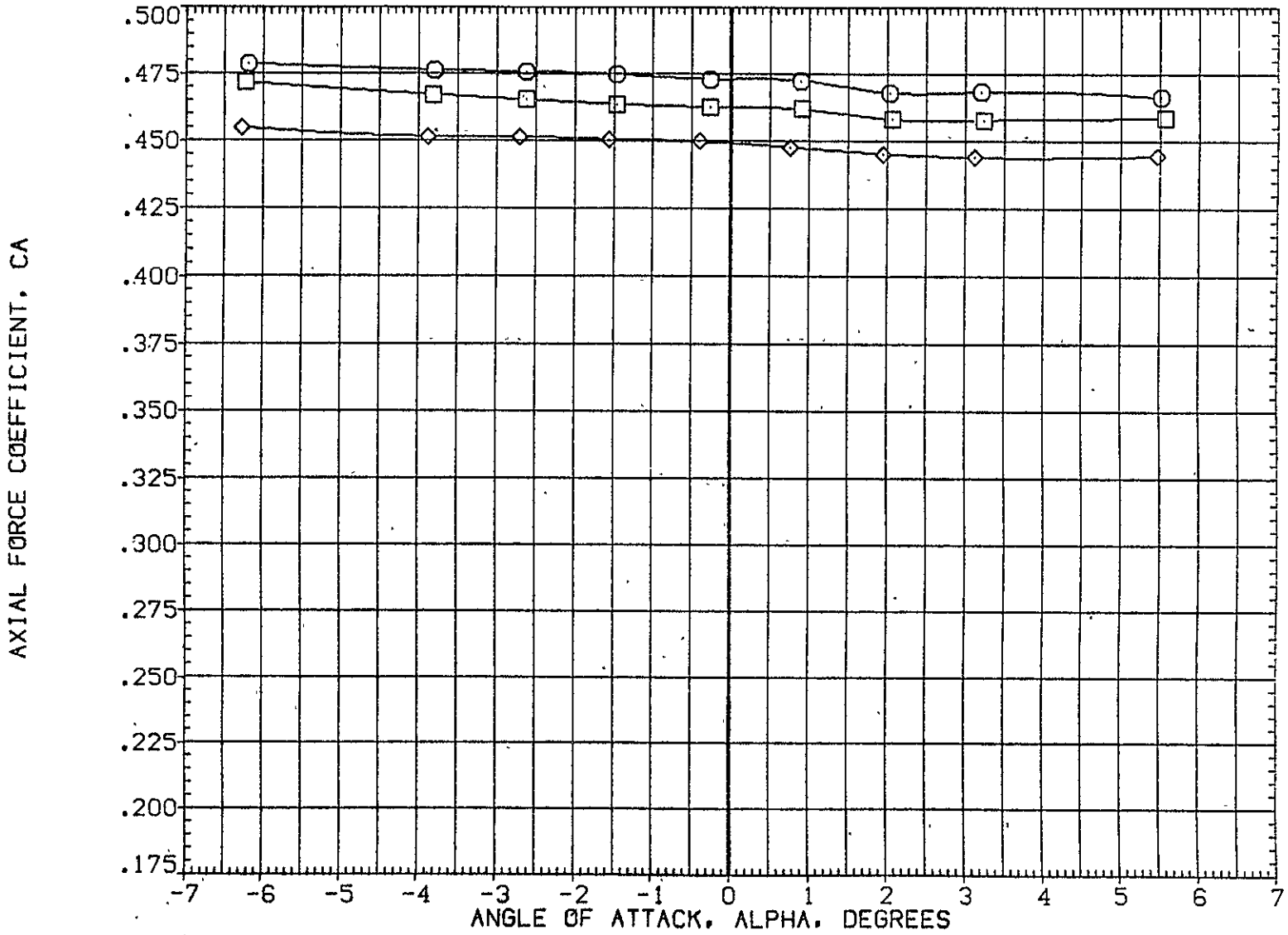


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01TIS1A1R1K1	.000	.000	90.000	.140
(AILO17)	□	MSFC TWT 600 (FA14)	01TIS2A1R1K1	.000	.000	90.000	.140
(AILO18)	⊠	MSFC TWT 600 (FA14)	01TIS2A1R1K1F12	.000	.000	90.000	.140
(AILO19)	△	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



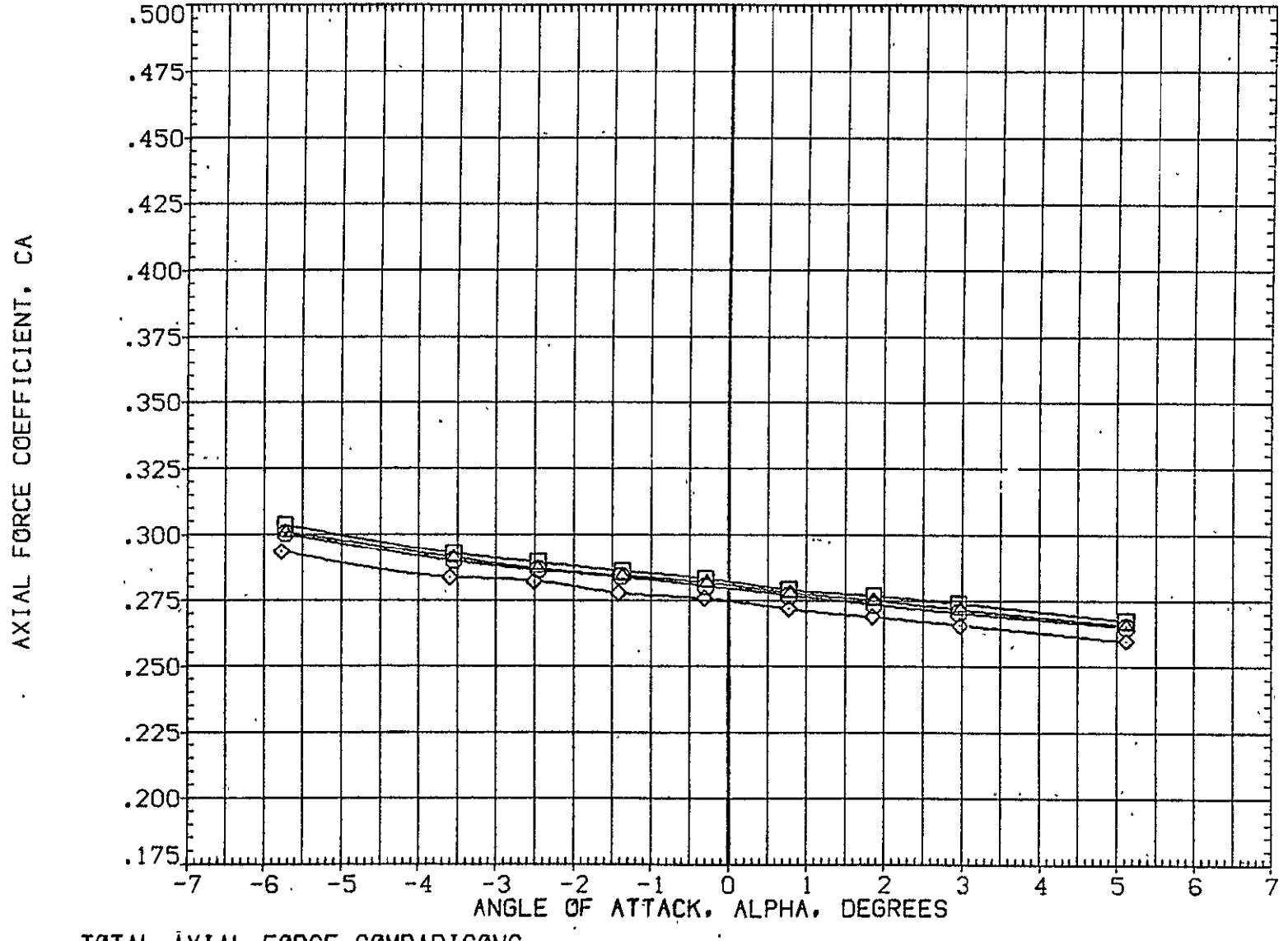
TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)	□	MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)	◇	MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140
(A1L019)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

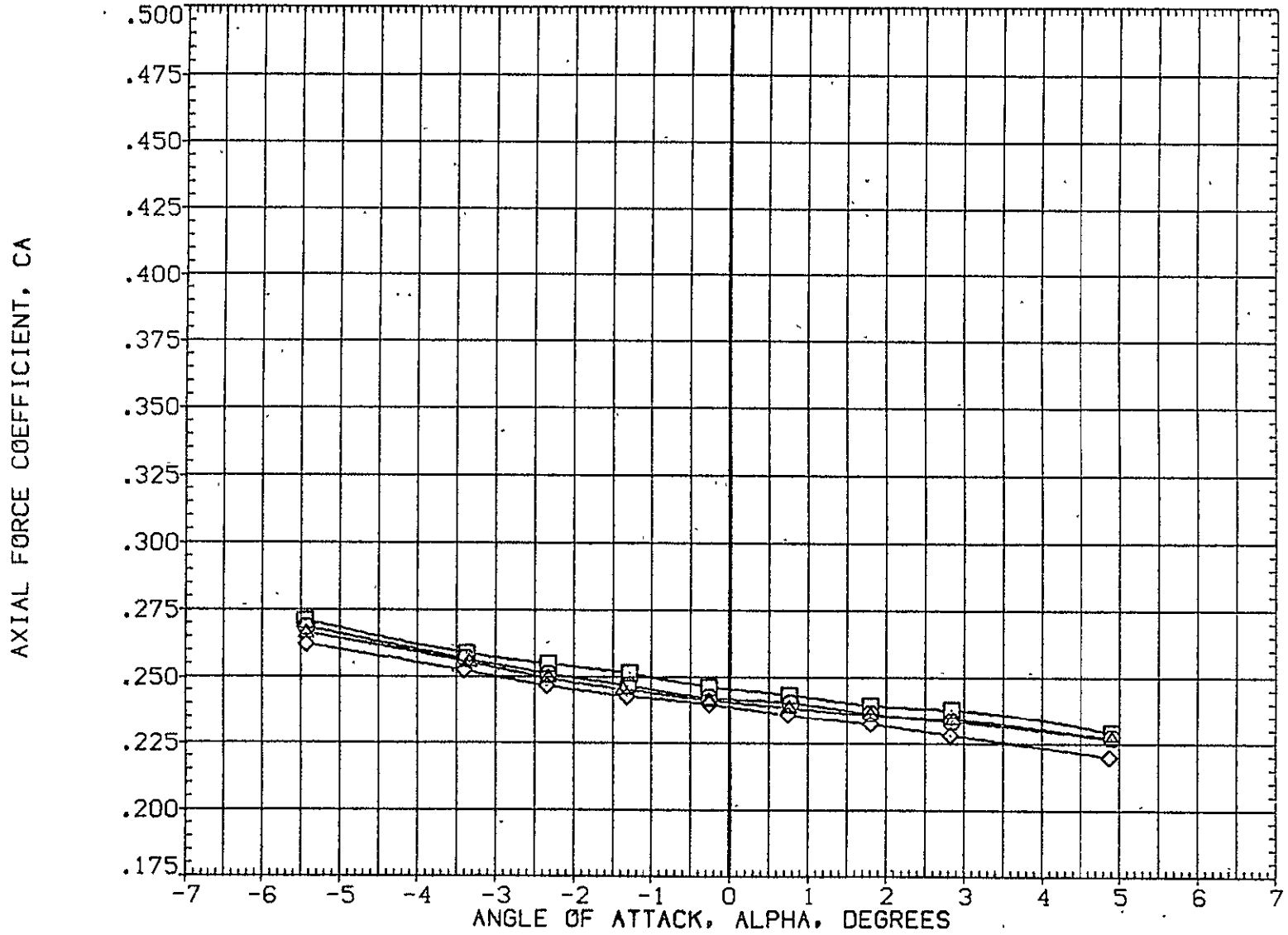


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L017)		MSFC TWT 600 (FA14)	01T1S2A1R1K1	.000	.000	90.000	.140
(A1L018)		MSFC TWT 600 (FA14)	01T1S2A1R1K1F12	.000	.000	90.000	.140
(A1L019)		MSFC TWT 600 (FA14)	01T1S1A1R1K1PS11	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

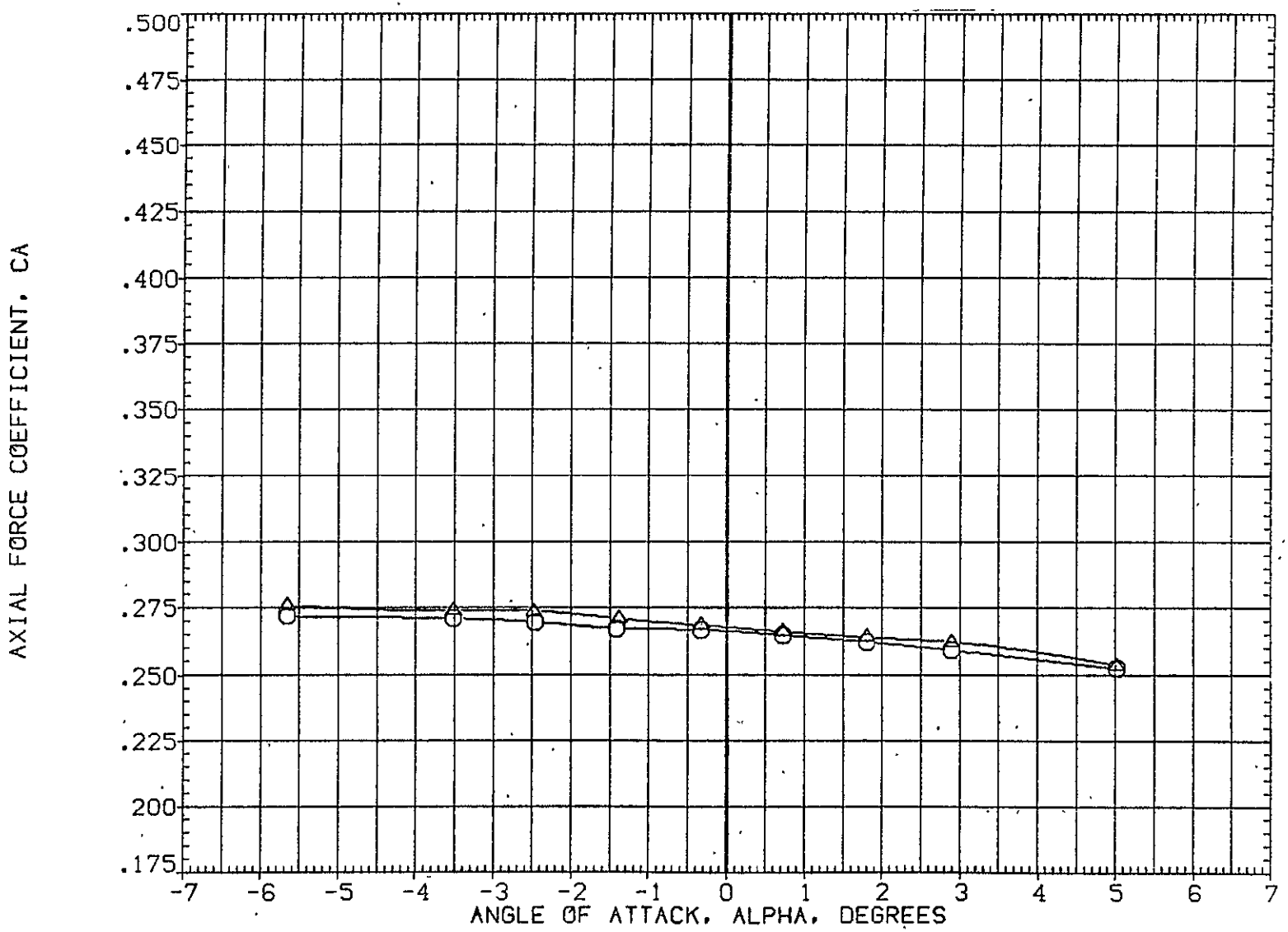


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L020)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L021)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L028)		MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

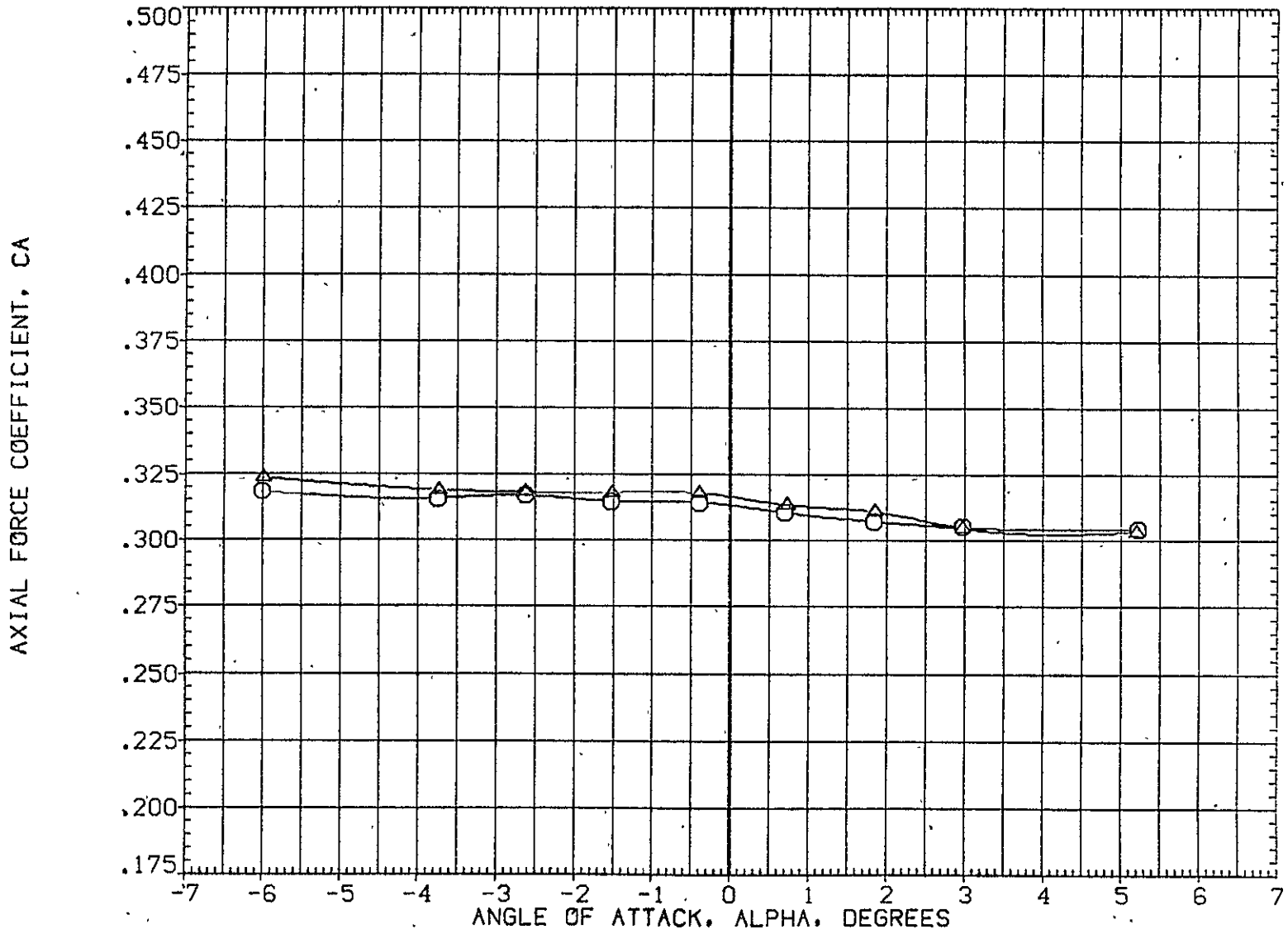


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L020)	⊡	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L021)	⊠	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L028)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

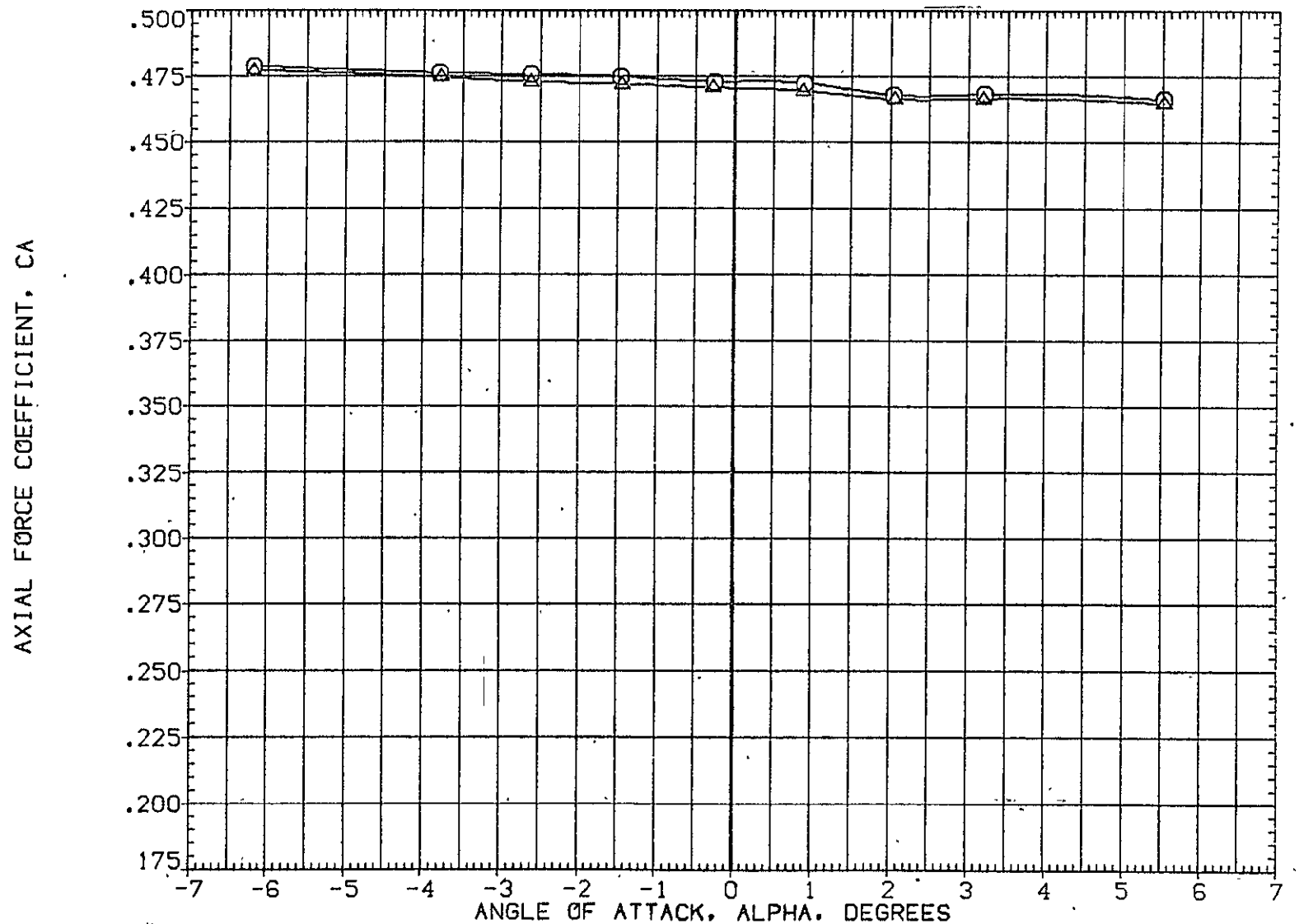


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO16)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(AILO20)	□	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO21)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140
(AILO28)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

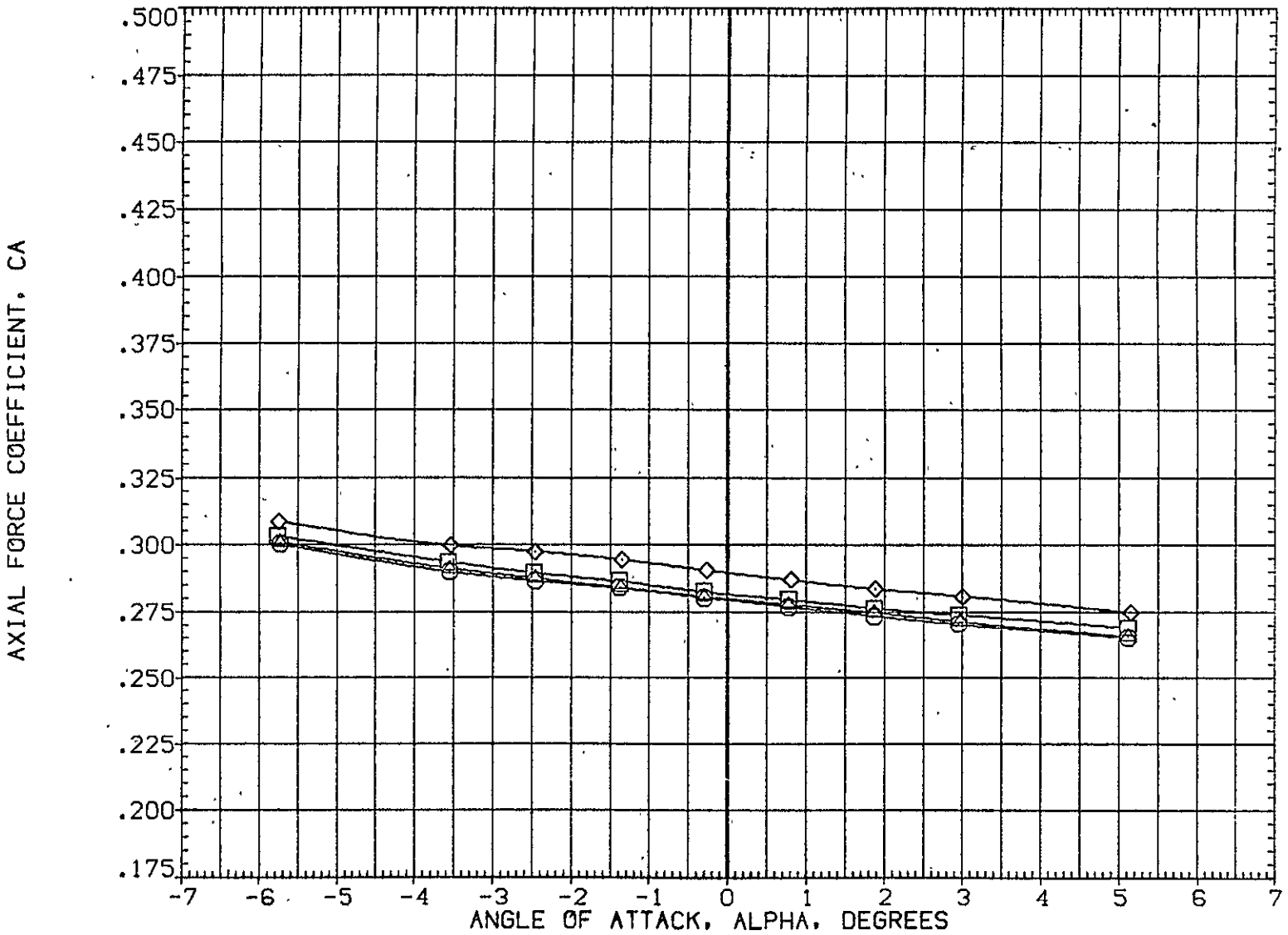


TOTAL AXIAL FORCE COMPARISONS

(C)MACH . = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L020)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	.000	90.000	.140
(A1L021)	⋈	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	.000	90.000	.140
(A1L028)	◁▷	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

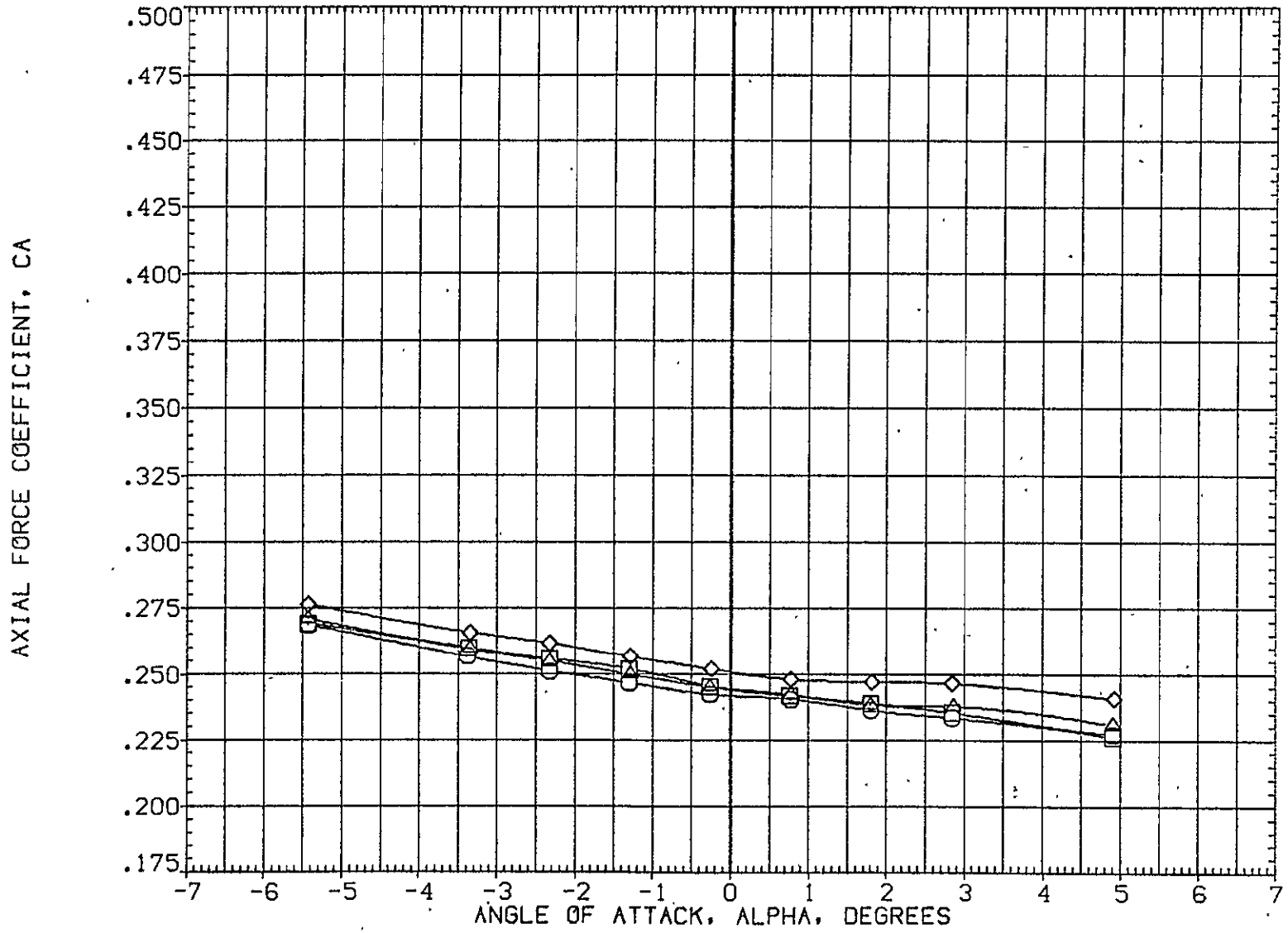


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L020)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS10PS11	.000	.000	90.000	.140
(A1L021)	⋈	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS12PS13	.000	.000	90.000	.140
(A1L028)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1PS14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

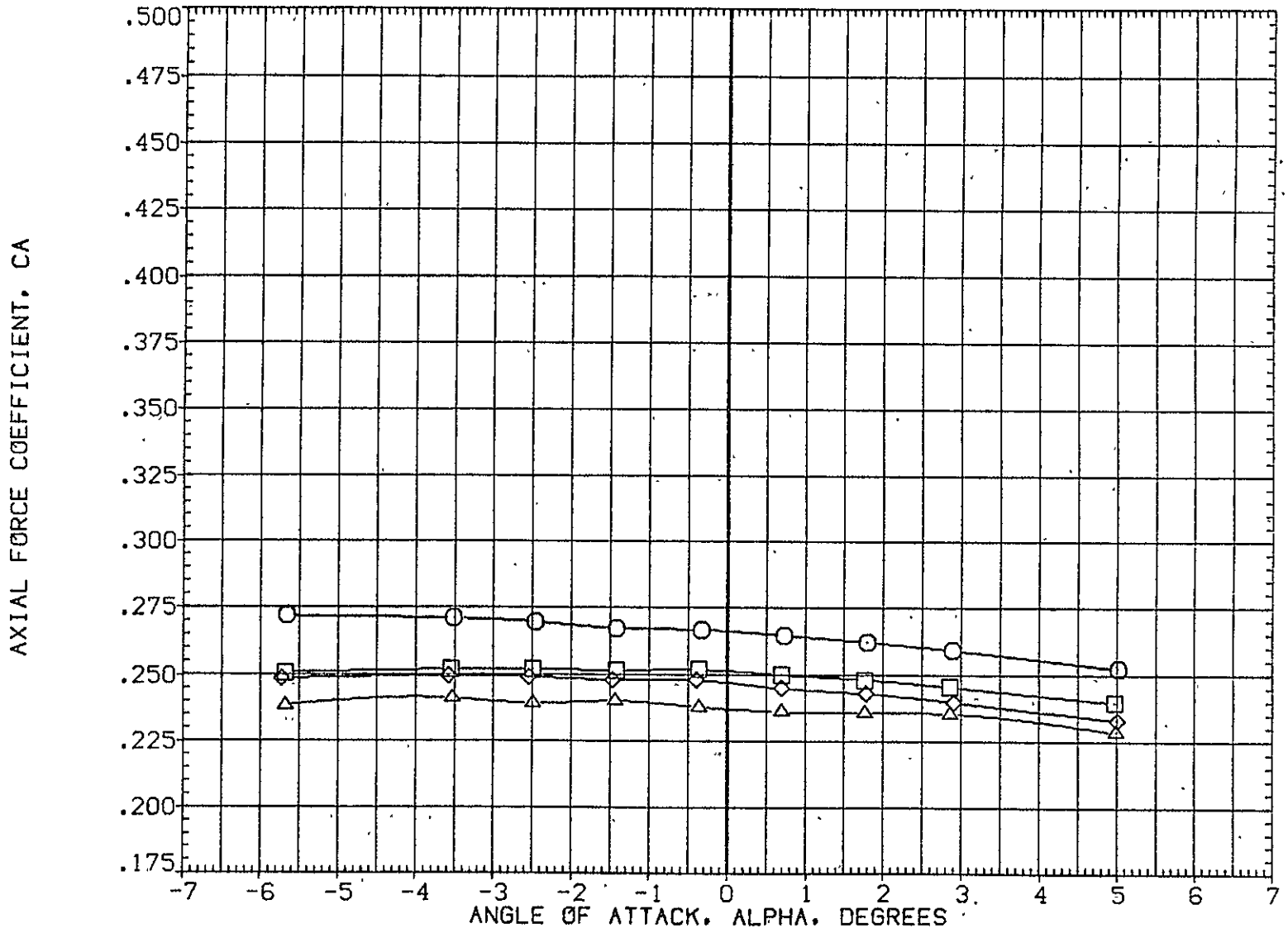


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L022)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

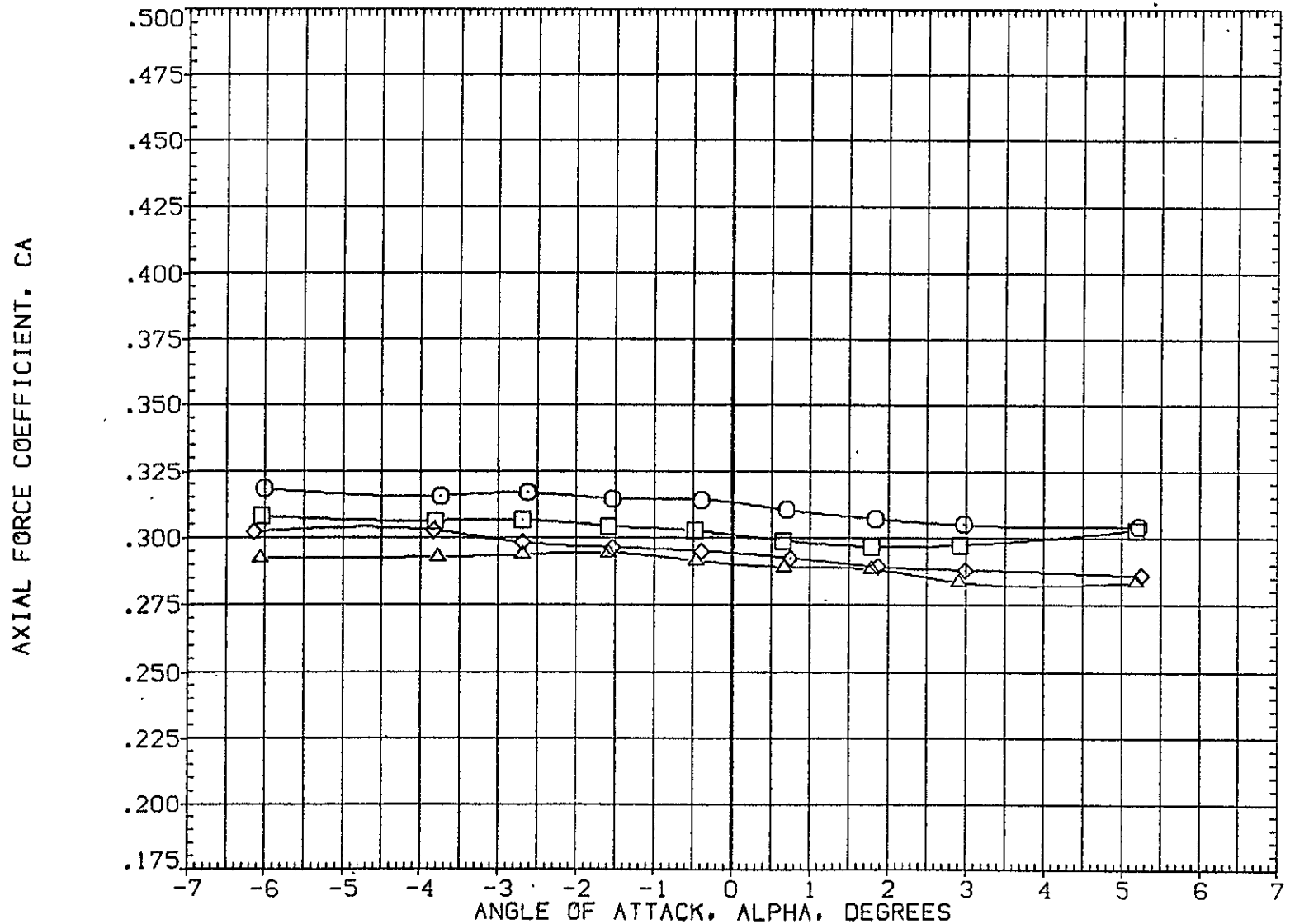


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L022)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

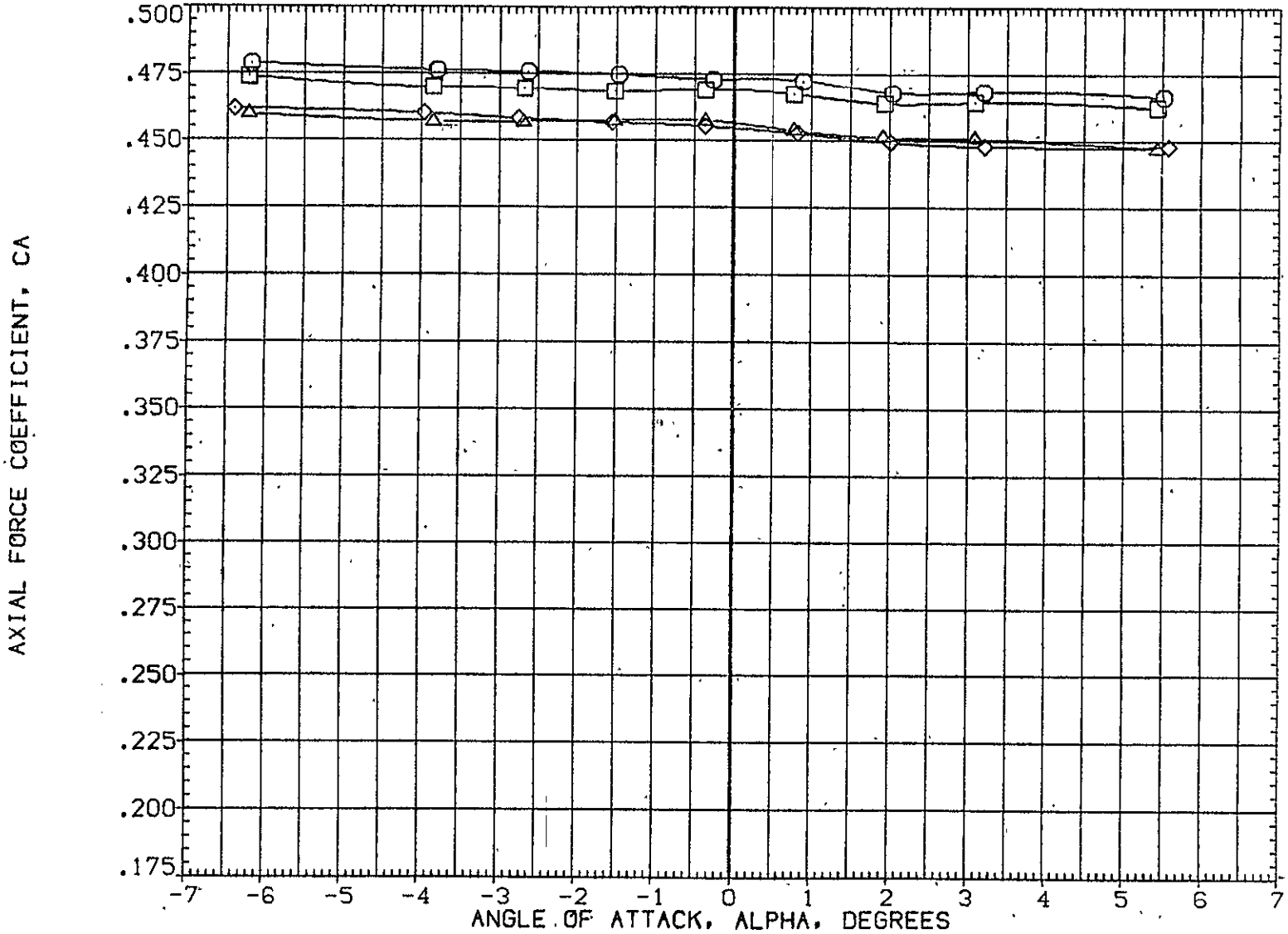


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L022)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

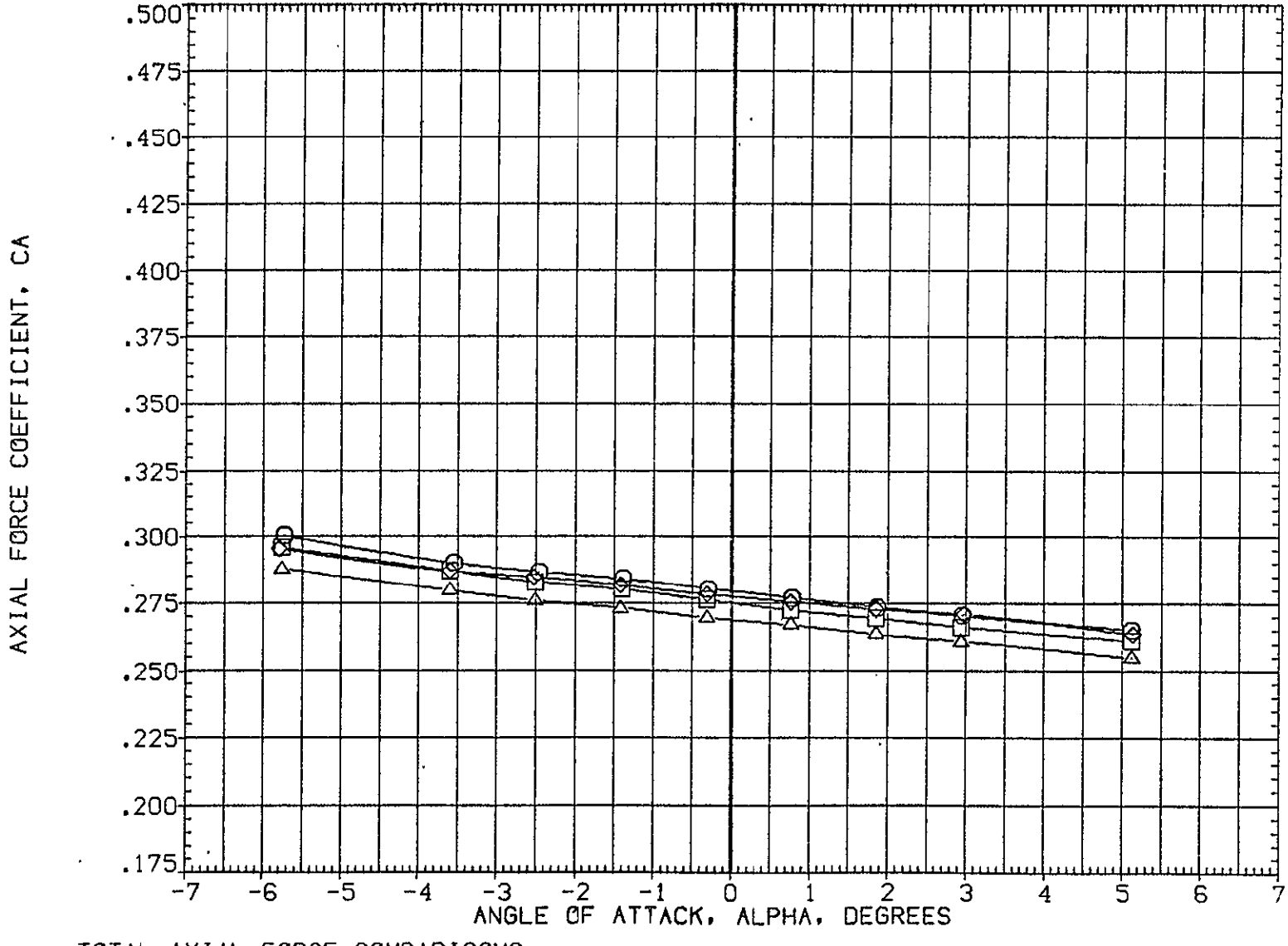


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L022)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

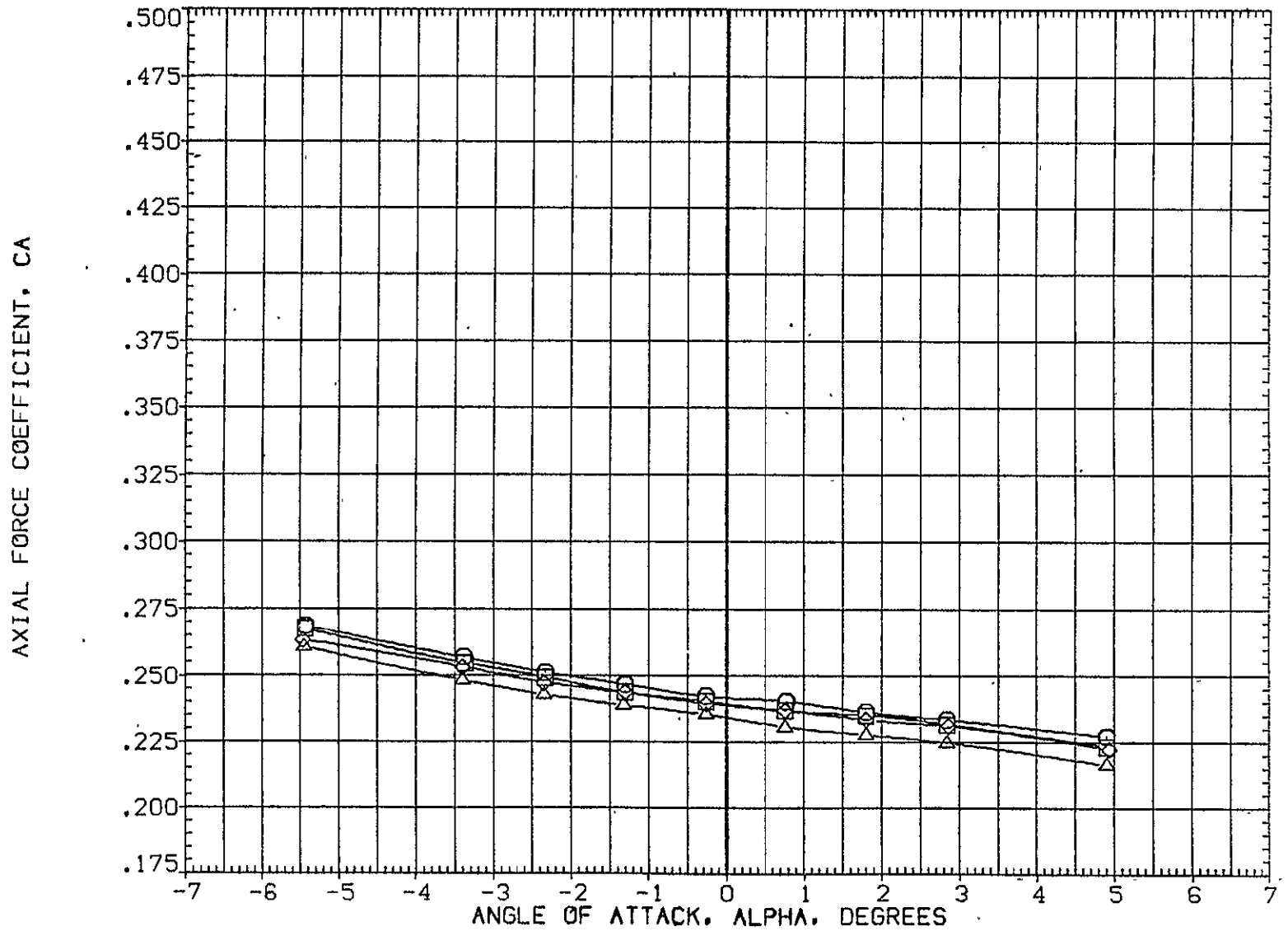


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ORBINC	PHI-S	Z
(A1L016)		MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L022)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F13	.000	.000	90.000	.140
(A1L023)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F11	.000	.000	90.000	.140
(A1L024)		MSFC TWT 600 (FA14)	01T1S1A1R1K1F12F14	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



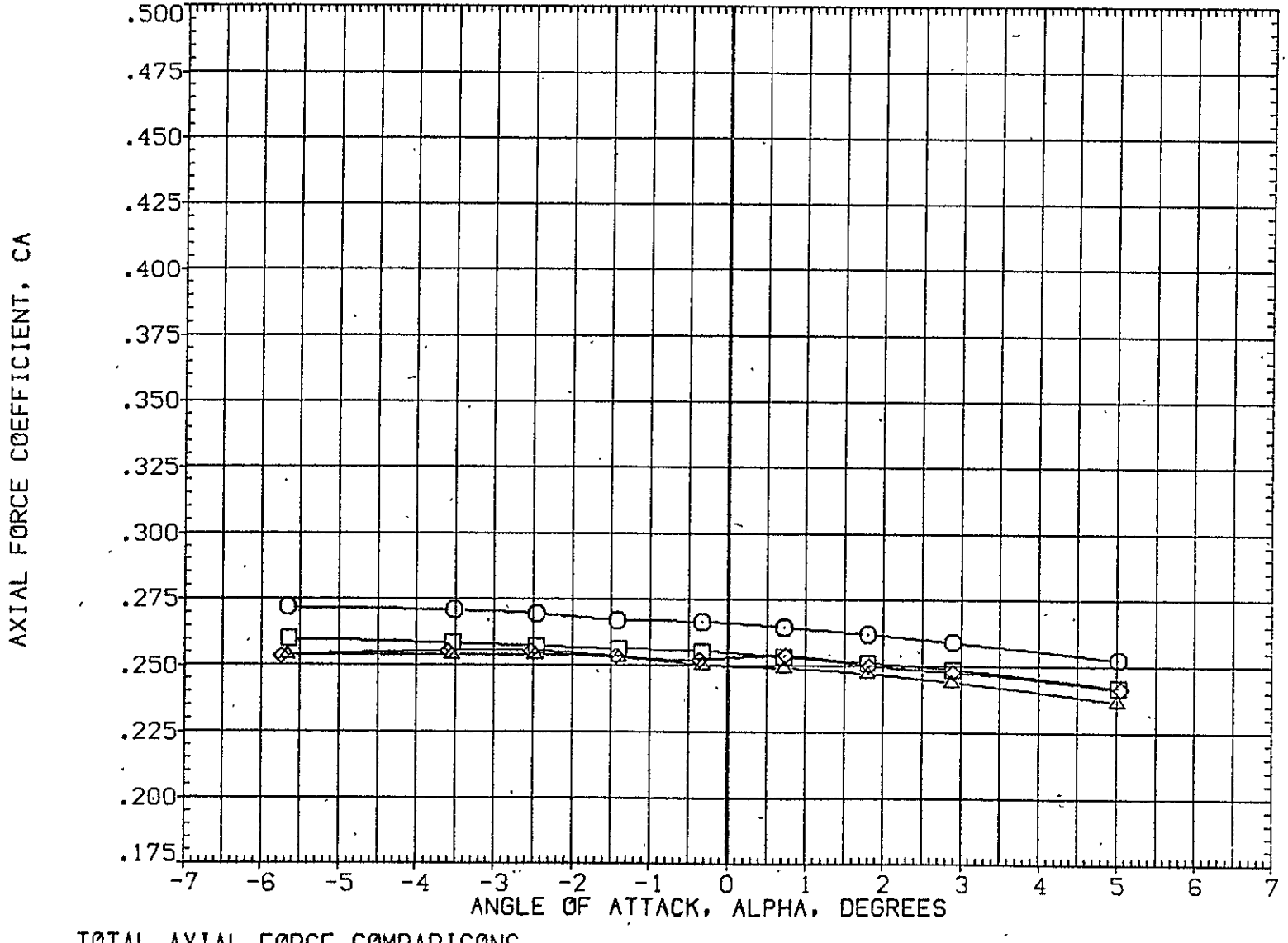
TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L025)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	



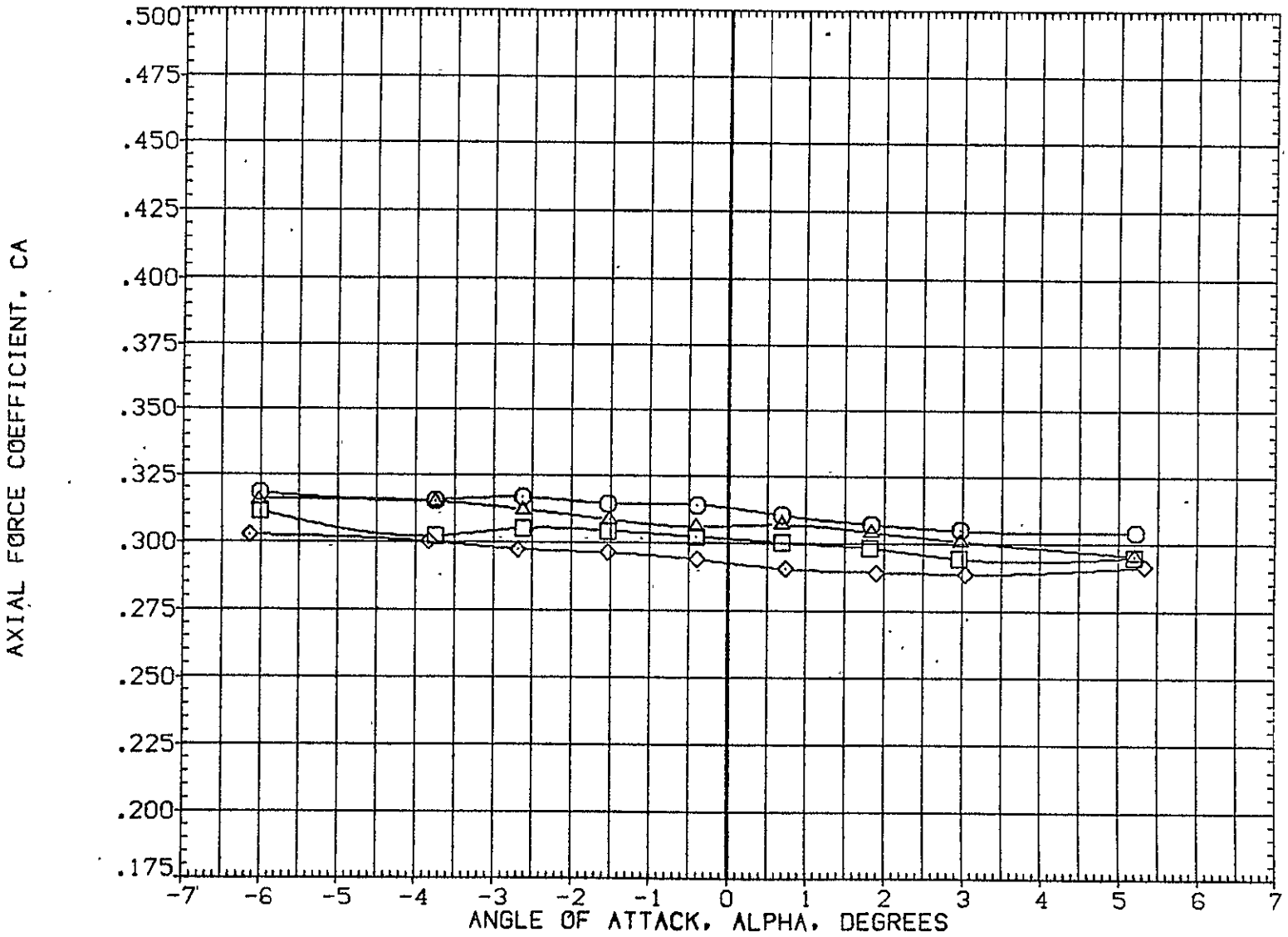
TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L025)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	⊠	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

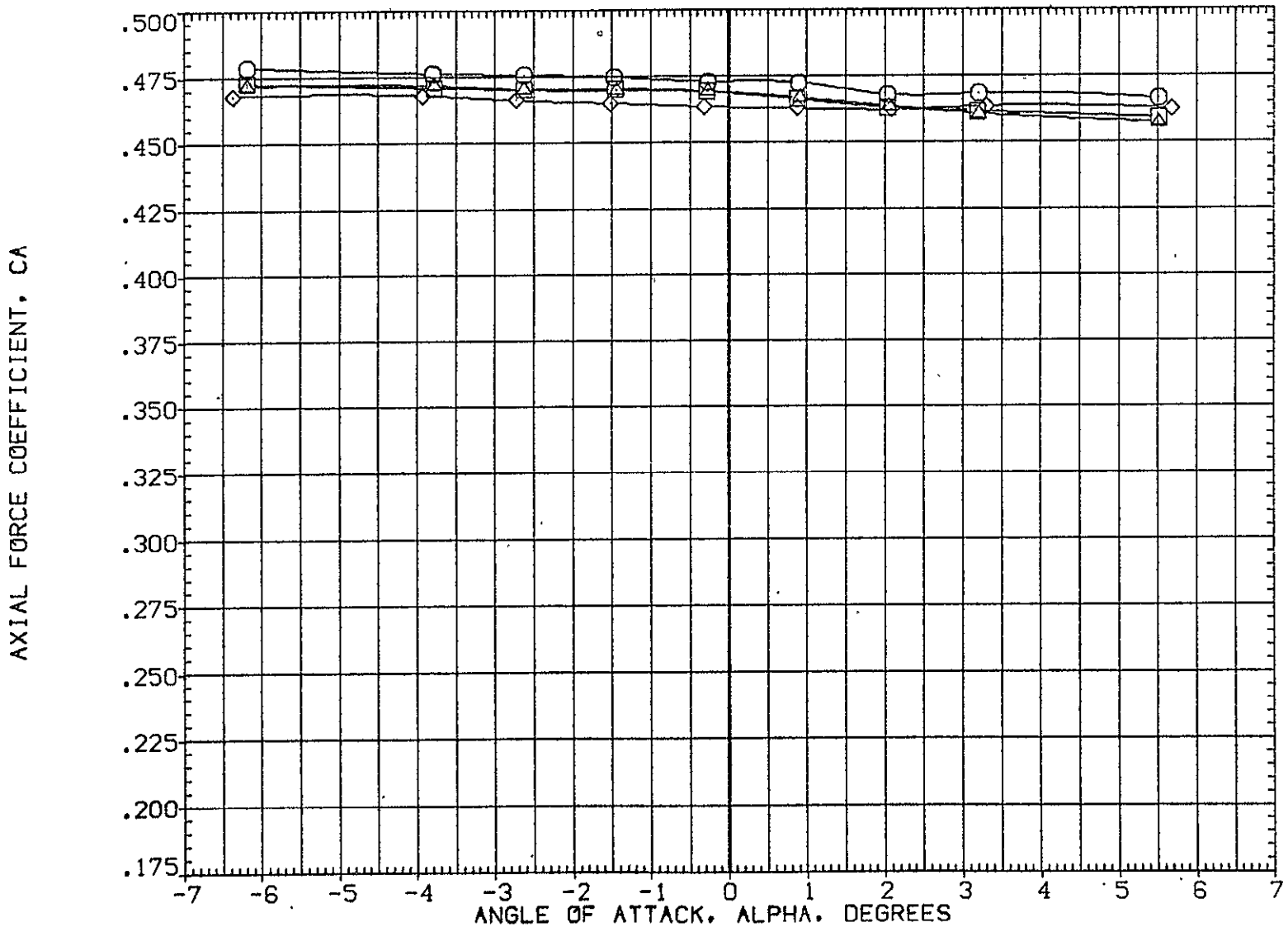


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L025)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

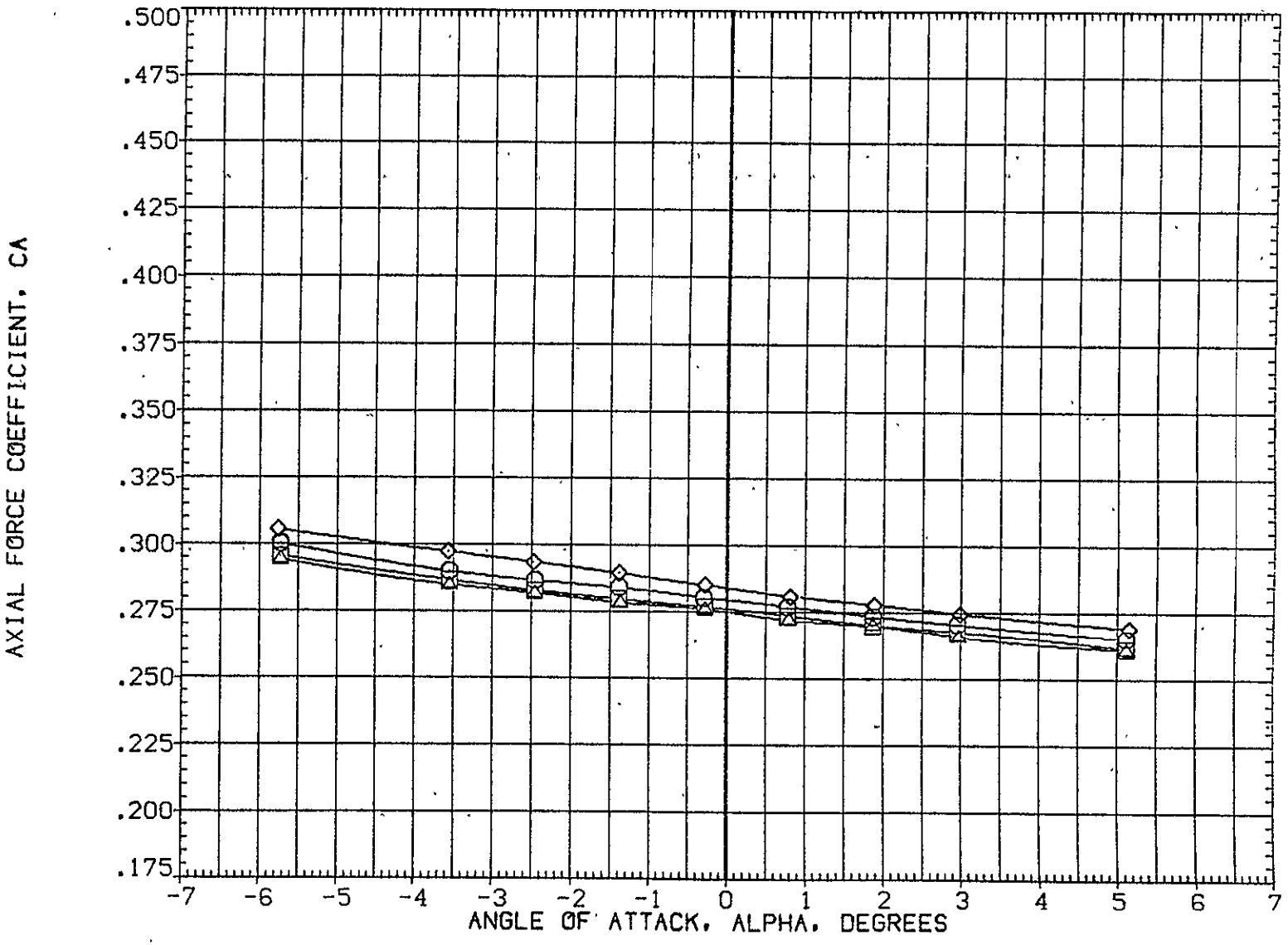


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	◇	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L025)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	⋈	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

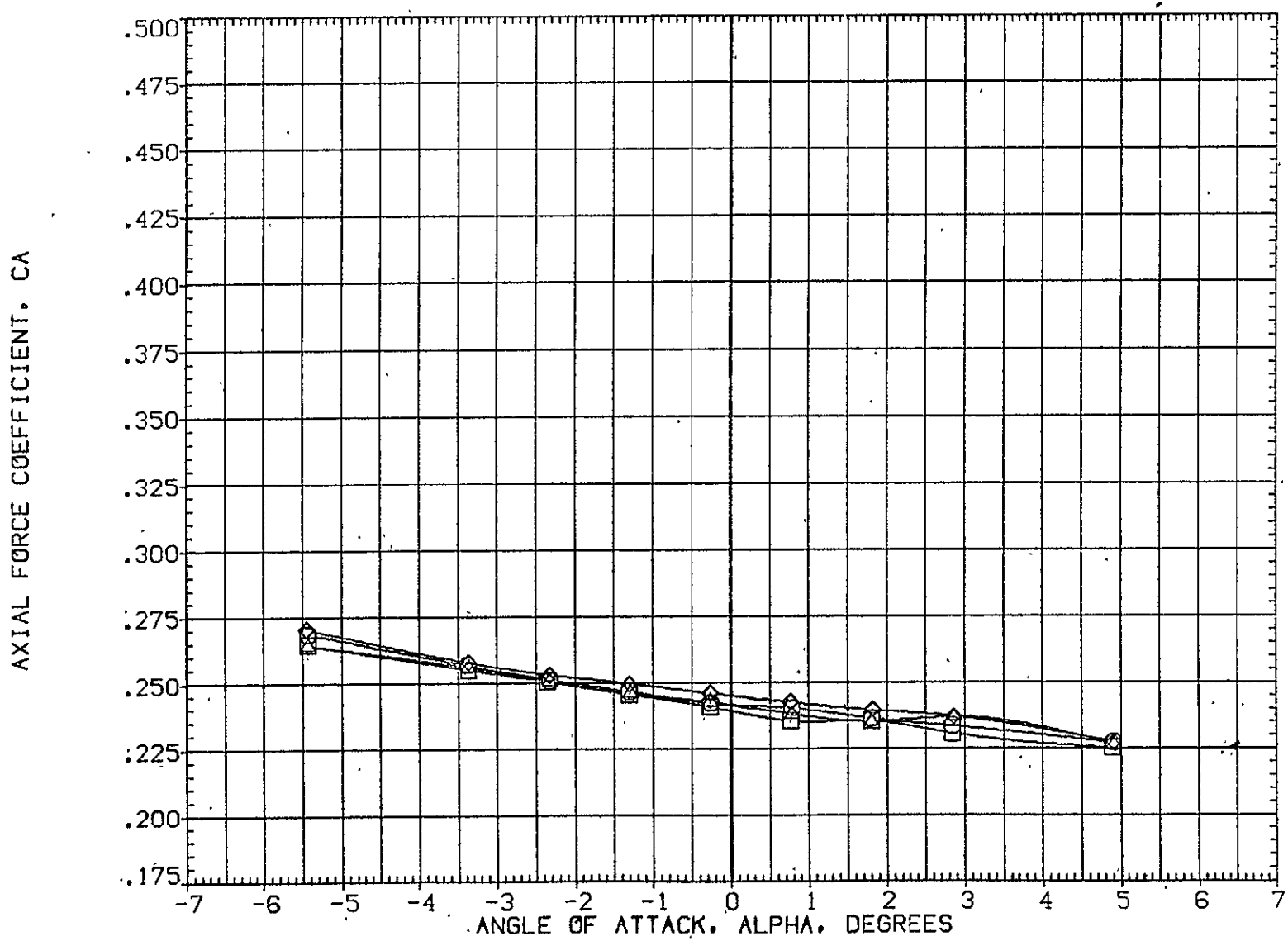


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L025)	⊠	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15	.000	.000	90.000	.140
(A1L026)	⊠	MSFC TWT 600 (FA14)	01T1S1A1R1K1F10F11	.000	.000	90.000	.140
(A1L027)	△	MSFC TWT 600 (FA14)	01T1S1A1R1K1F14F15F16	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



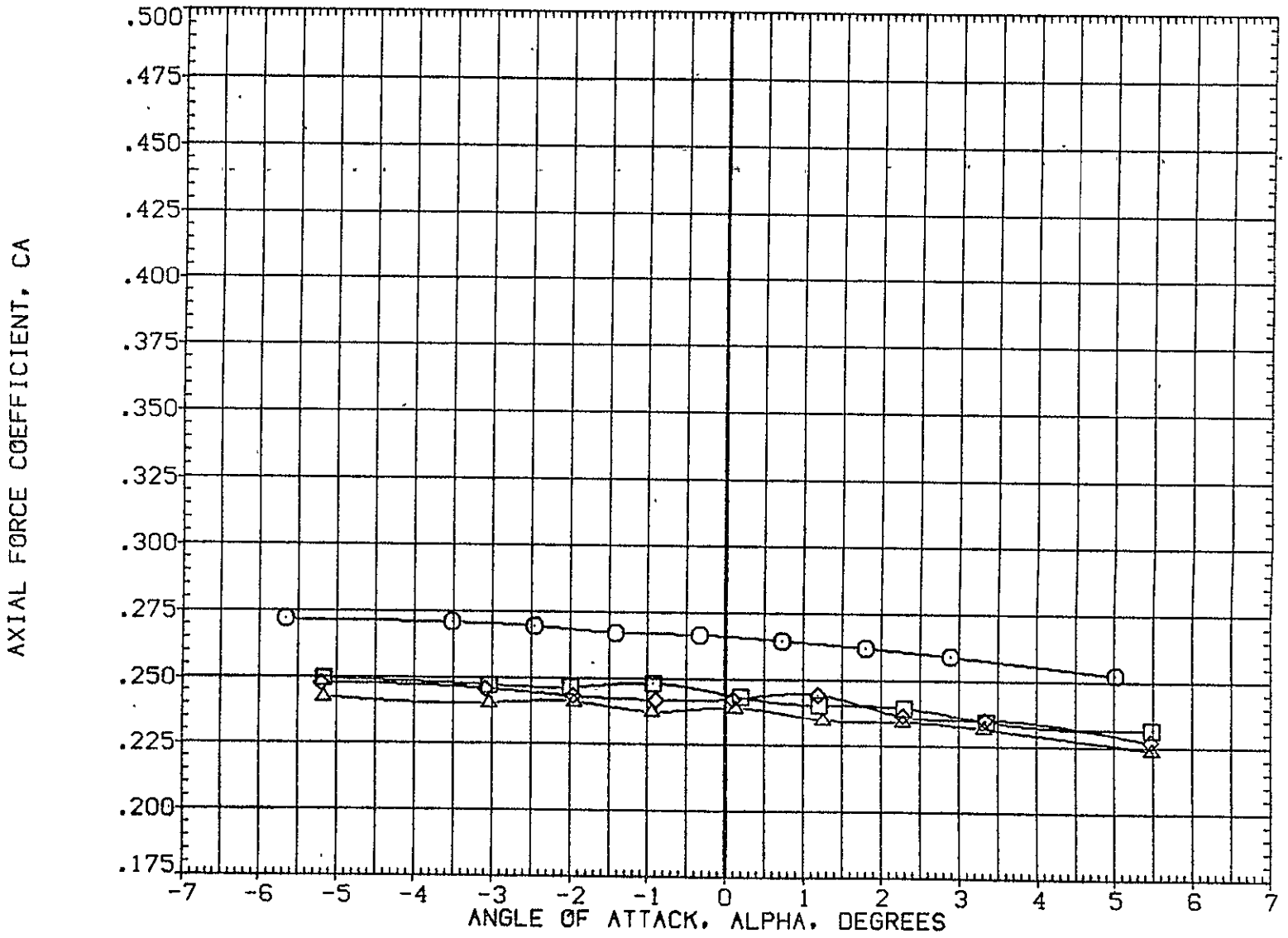
TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140
(A1L044)	△	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

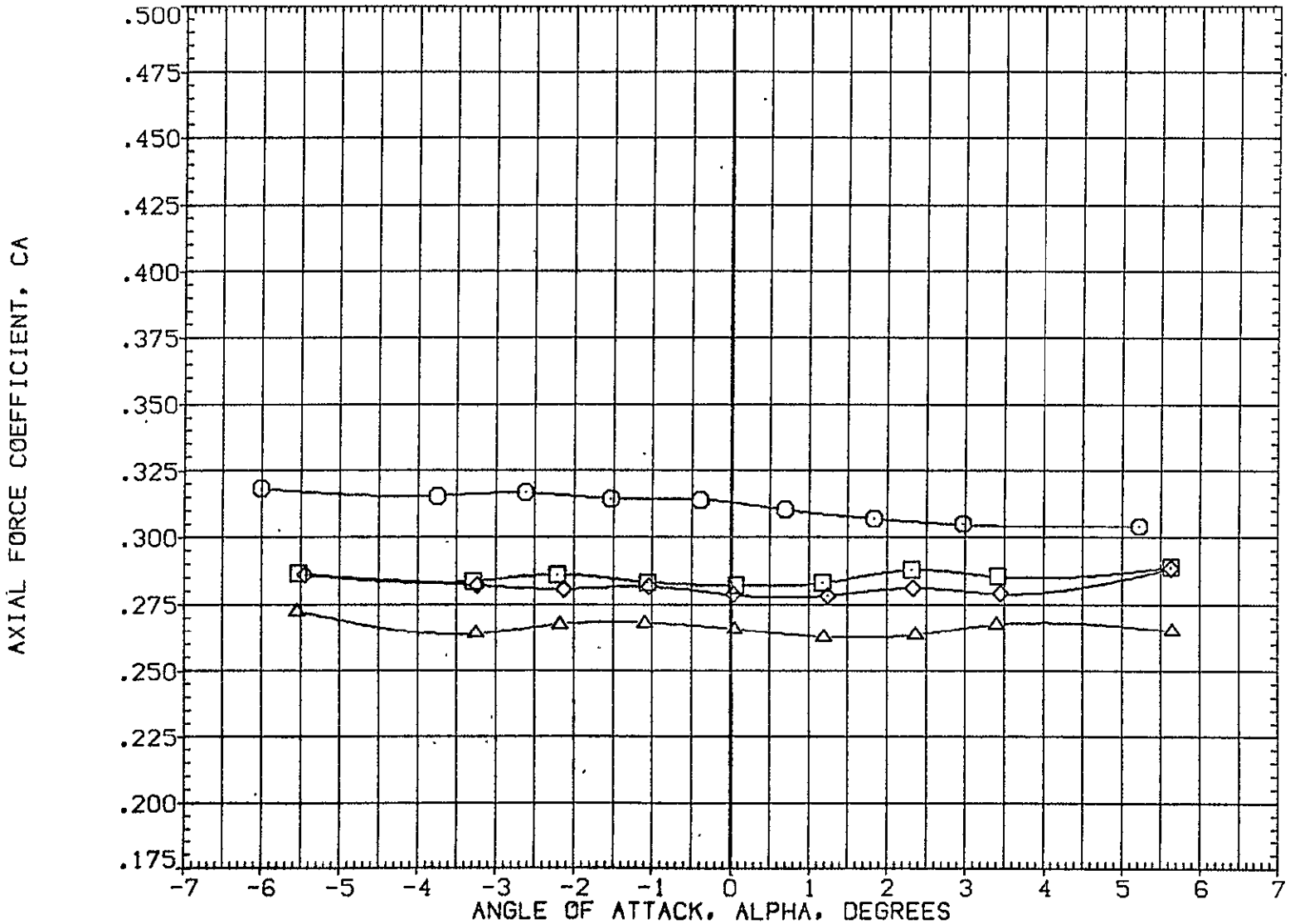


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140
(A1L044)	△	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X'
YMRP	.0000	IN. Y'
ZMRP	.0000	IN. Z'
SCALE	.0040	

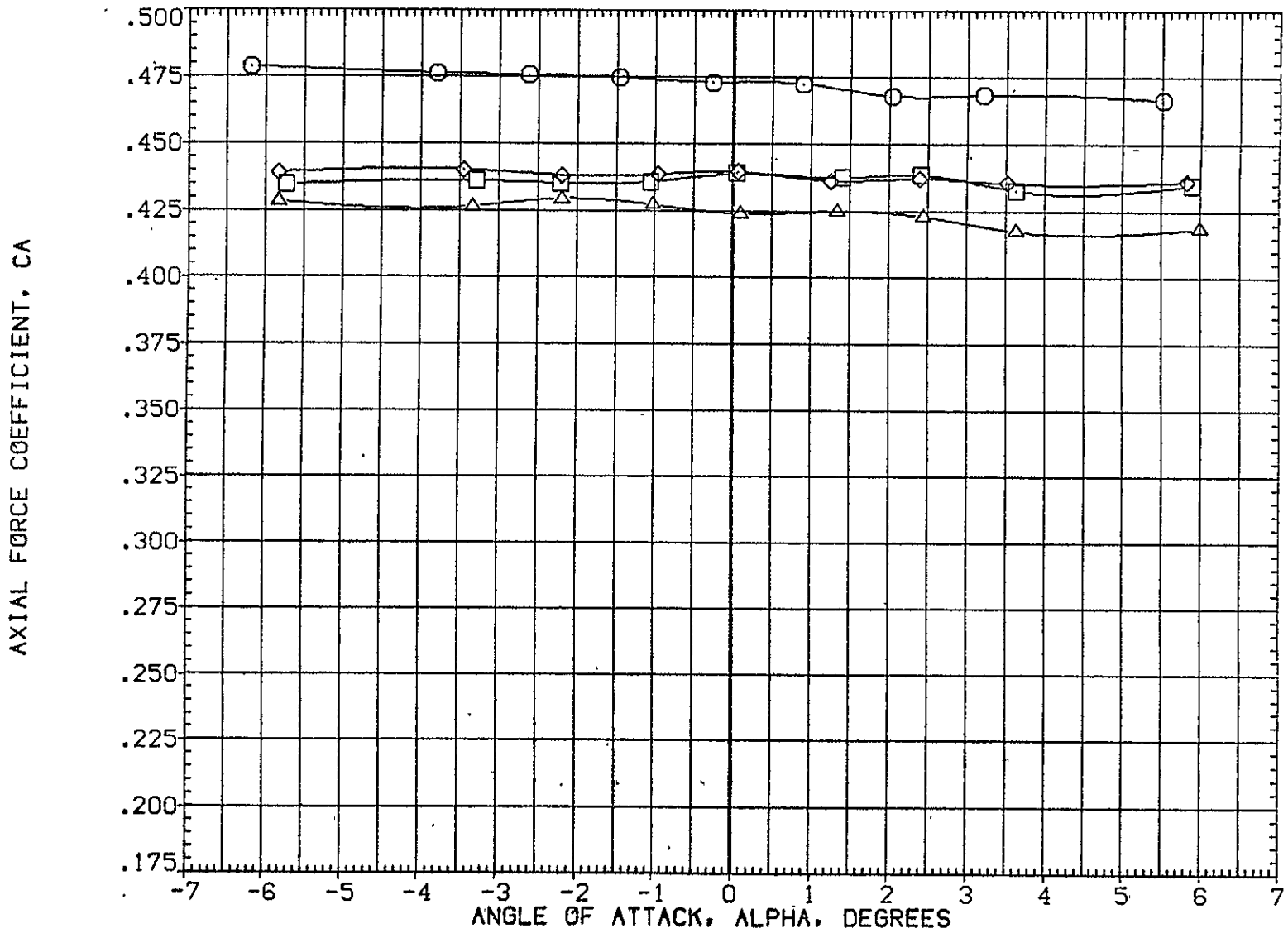


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F19	.000	.000	90.000	.140
(A1L044)	△	MSFC TWT 600 (FA14)	02T1S3A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

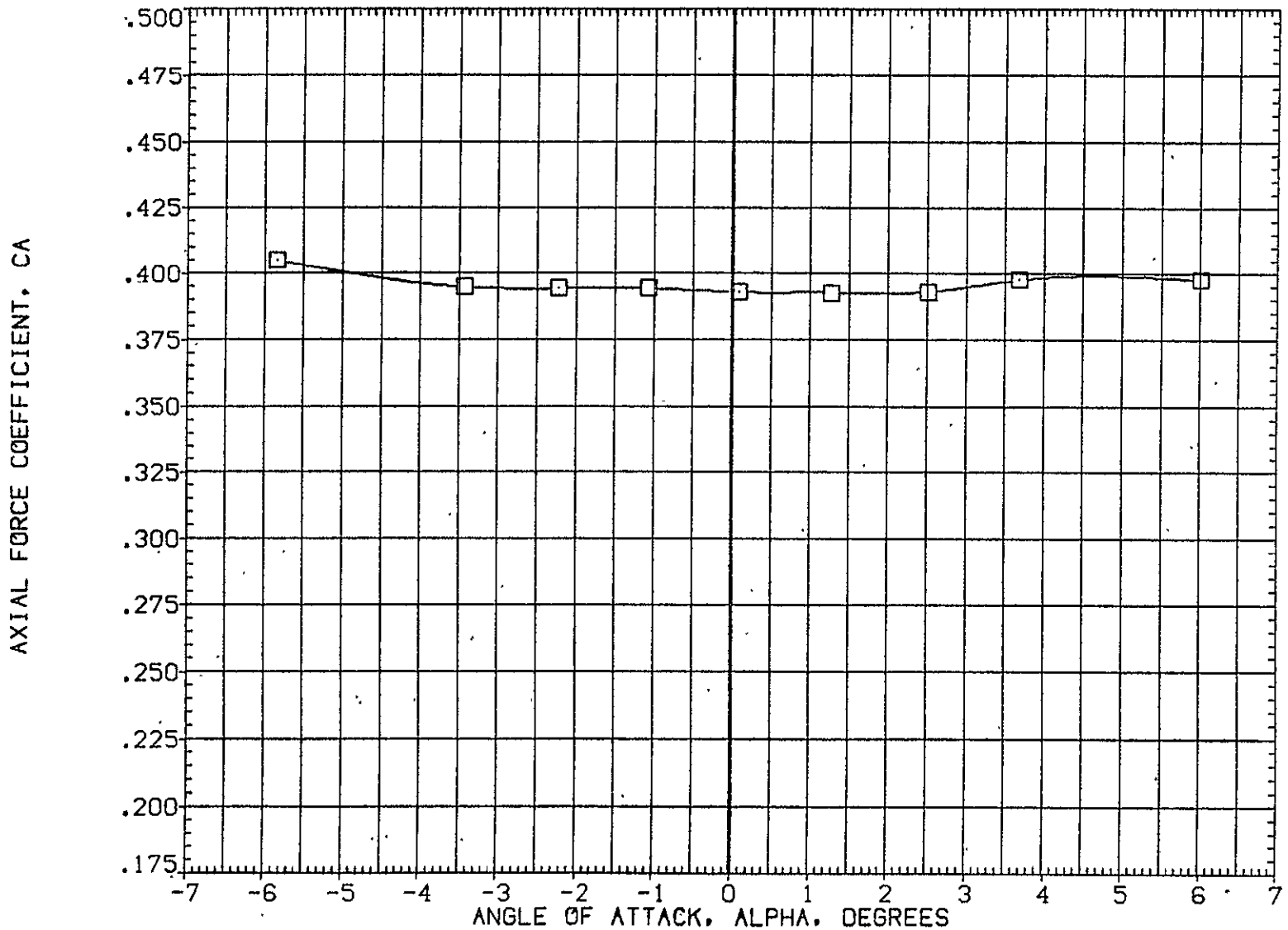


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)		DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L044)		DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

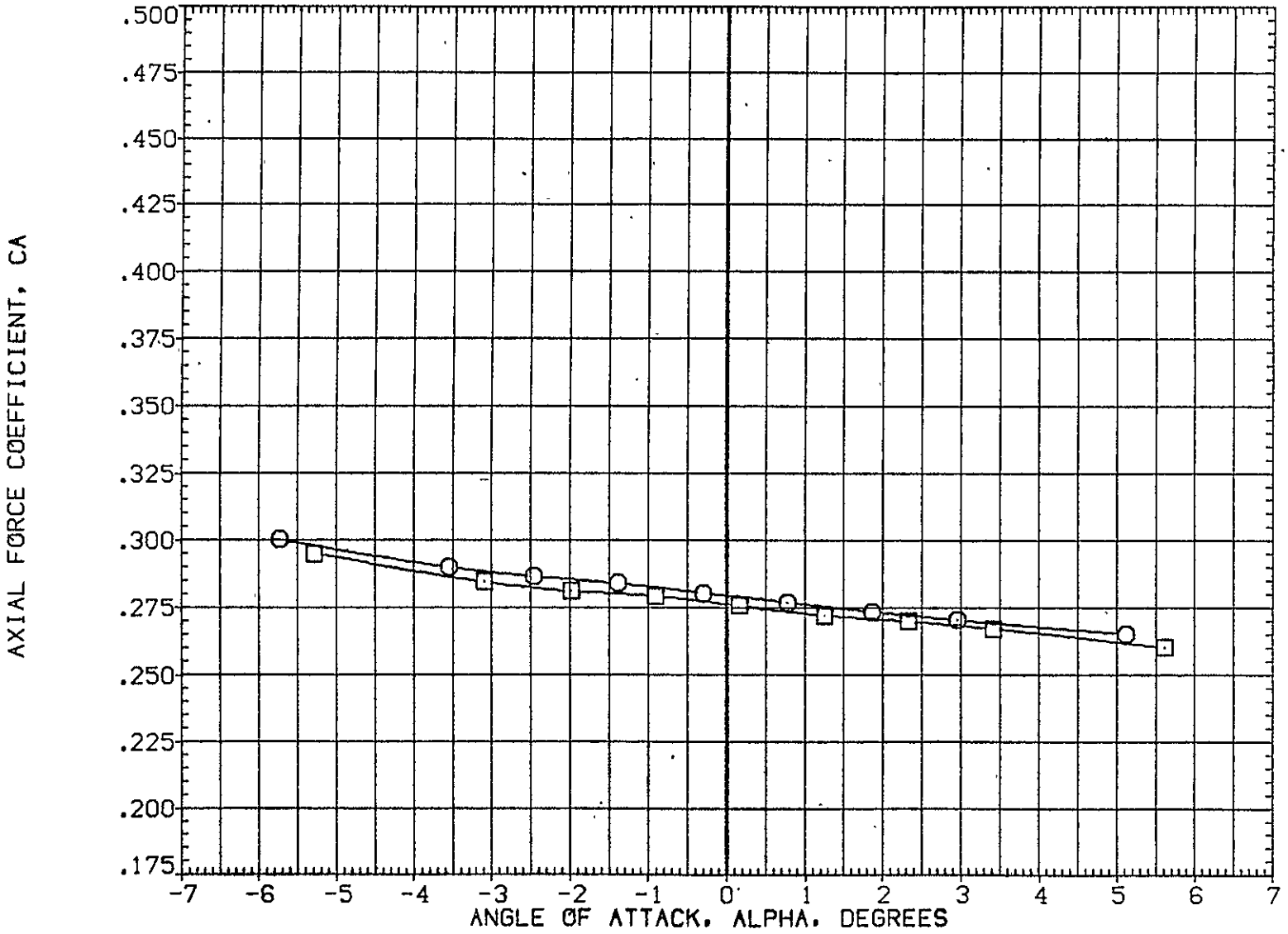


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	○	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	⋈	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L044)	△	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

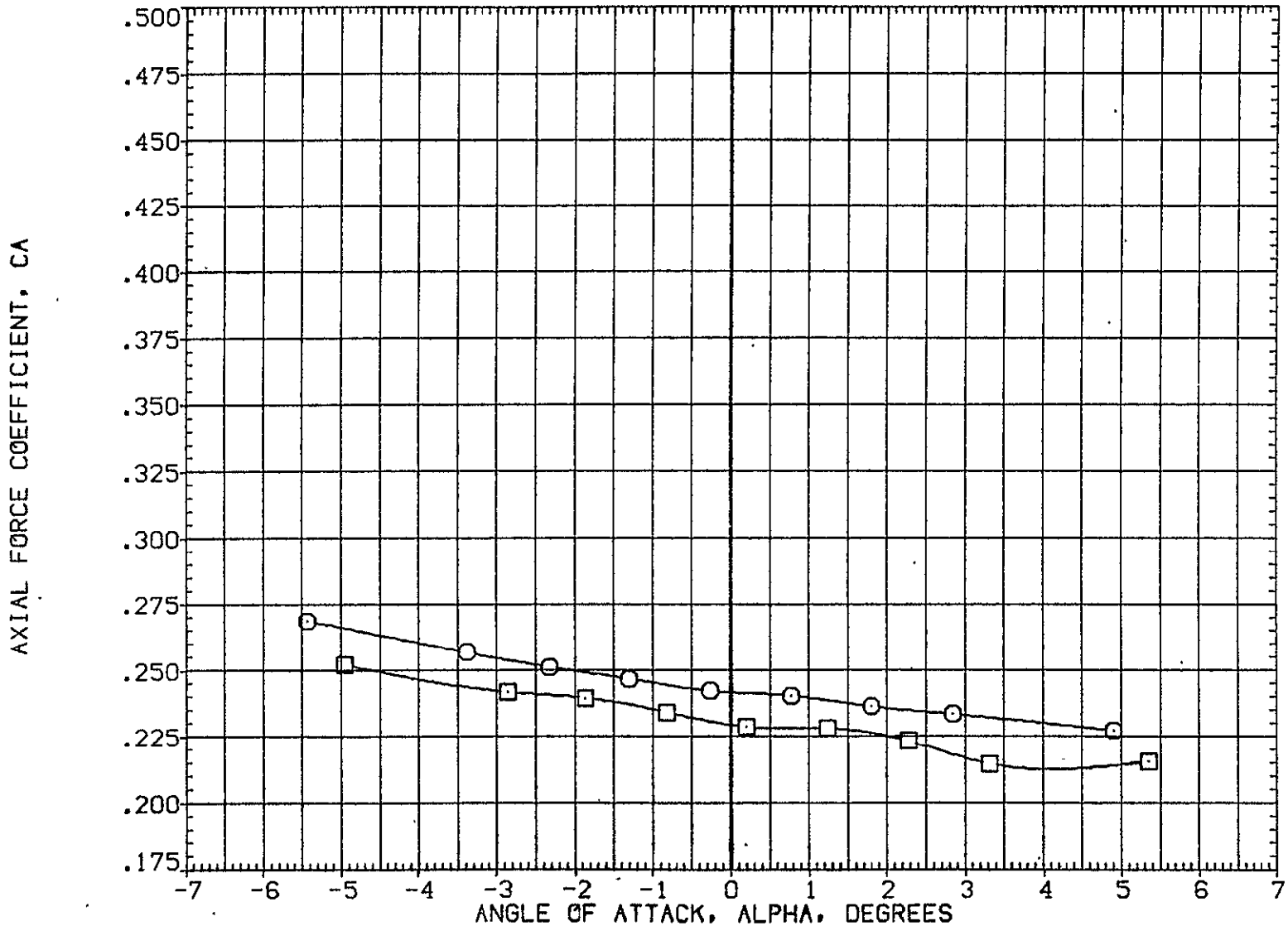


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L016)	□	MSFC TWT 600 (FA14)	01T1S1A1R1K1	.000	.000	90.000	.140
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L030)	◇	DATA NOT AVAILABLE		.000	.000	90.000	.140
(A1L044)	⧖	DATA NOT AVAILABLE		.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

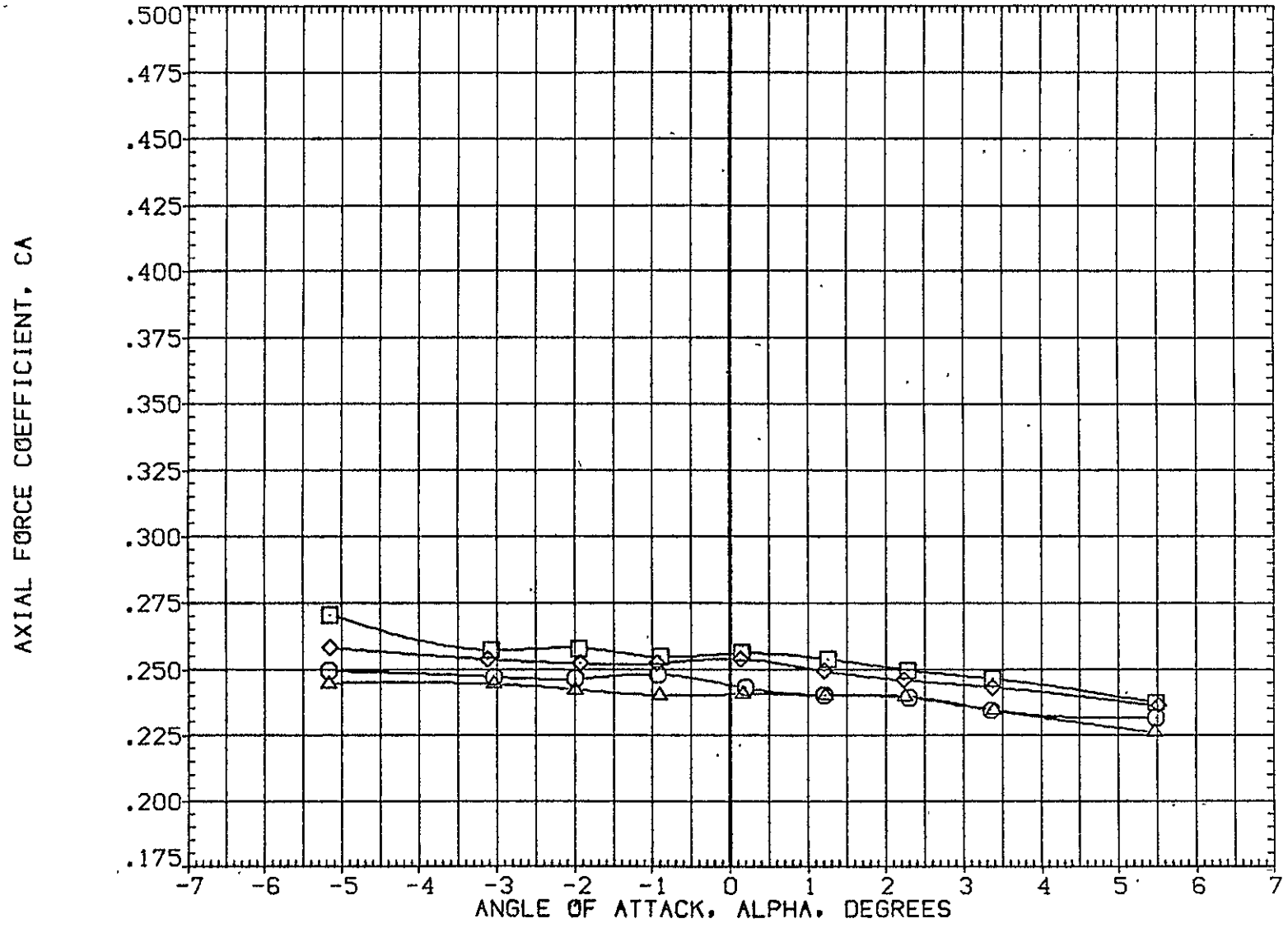


TOTAL AXIAL FORCE COMPARISONS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L031)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	△	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

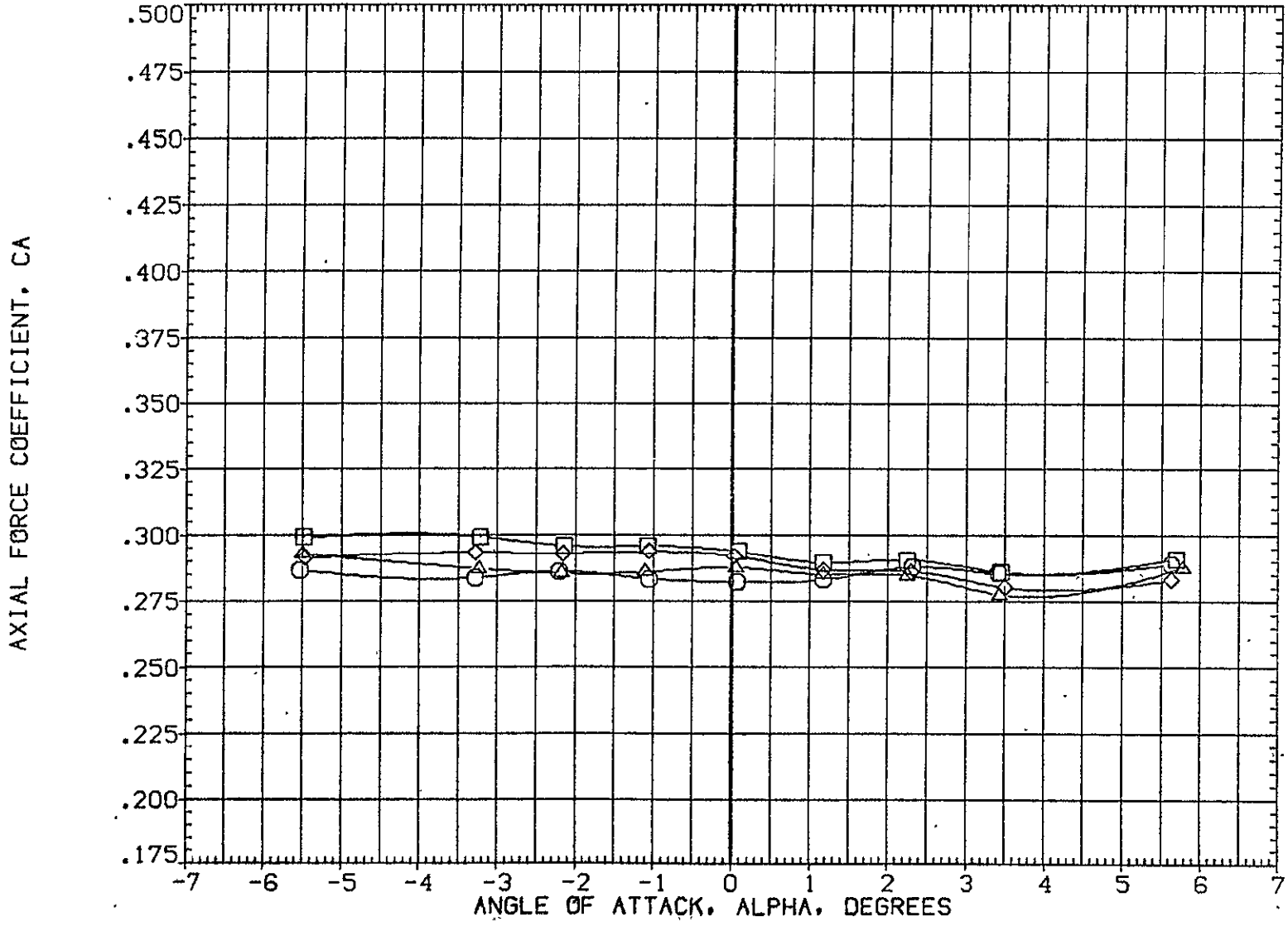


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L031)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(A1L032)	◇	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(A1L033)	△	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

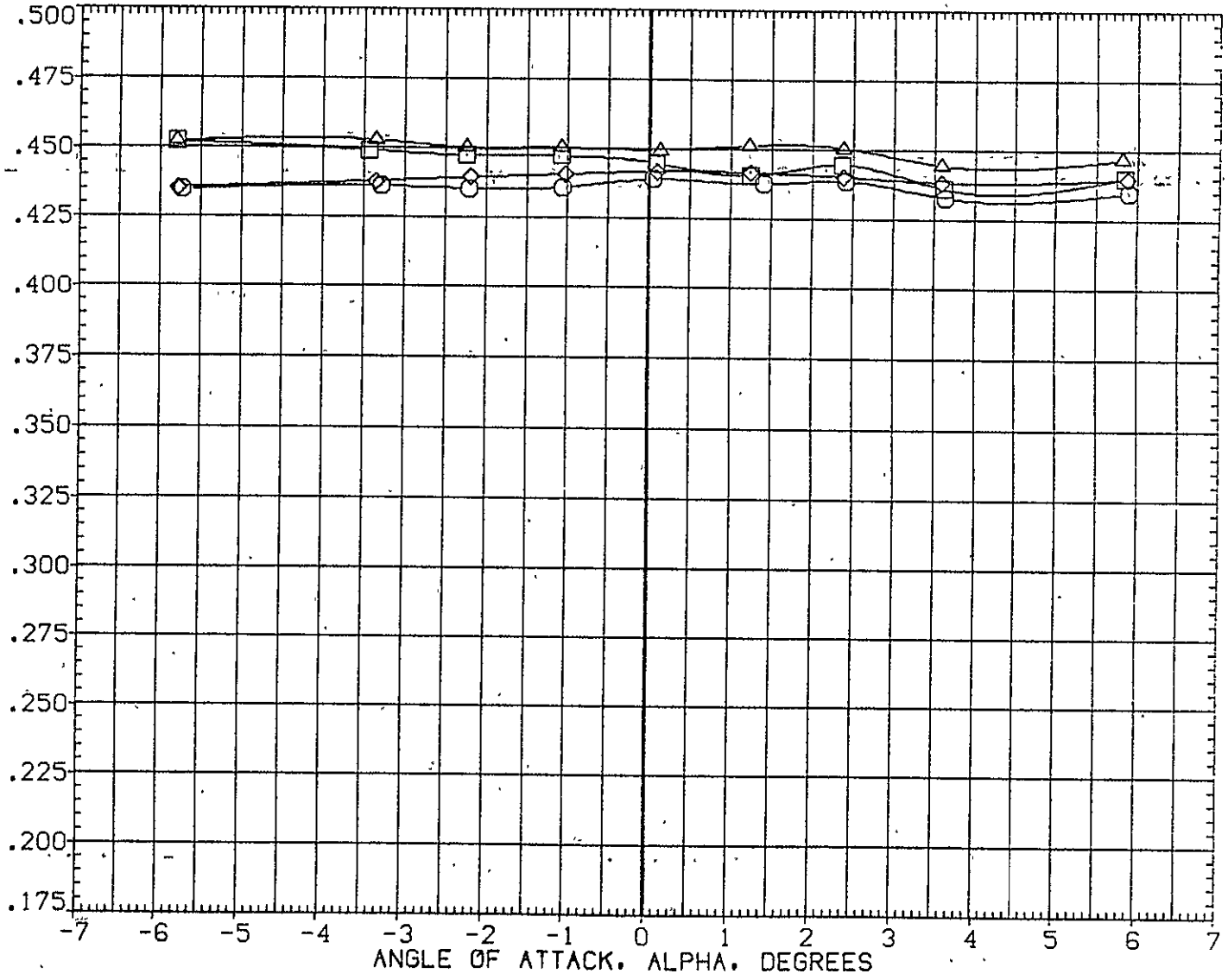


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AIL029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AIL031)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1F20	.000	.000	90.000	.140
(AIL032)	⊠	MSFC TWT 600 (FA14)	02T1S1A1R1K1F21	.000	.000	90.000	.140
(AIL033)	△	MSFC TWT 600 (FA14)	02T1S1A1R1K1F22	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

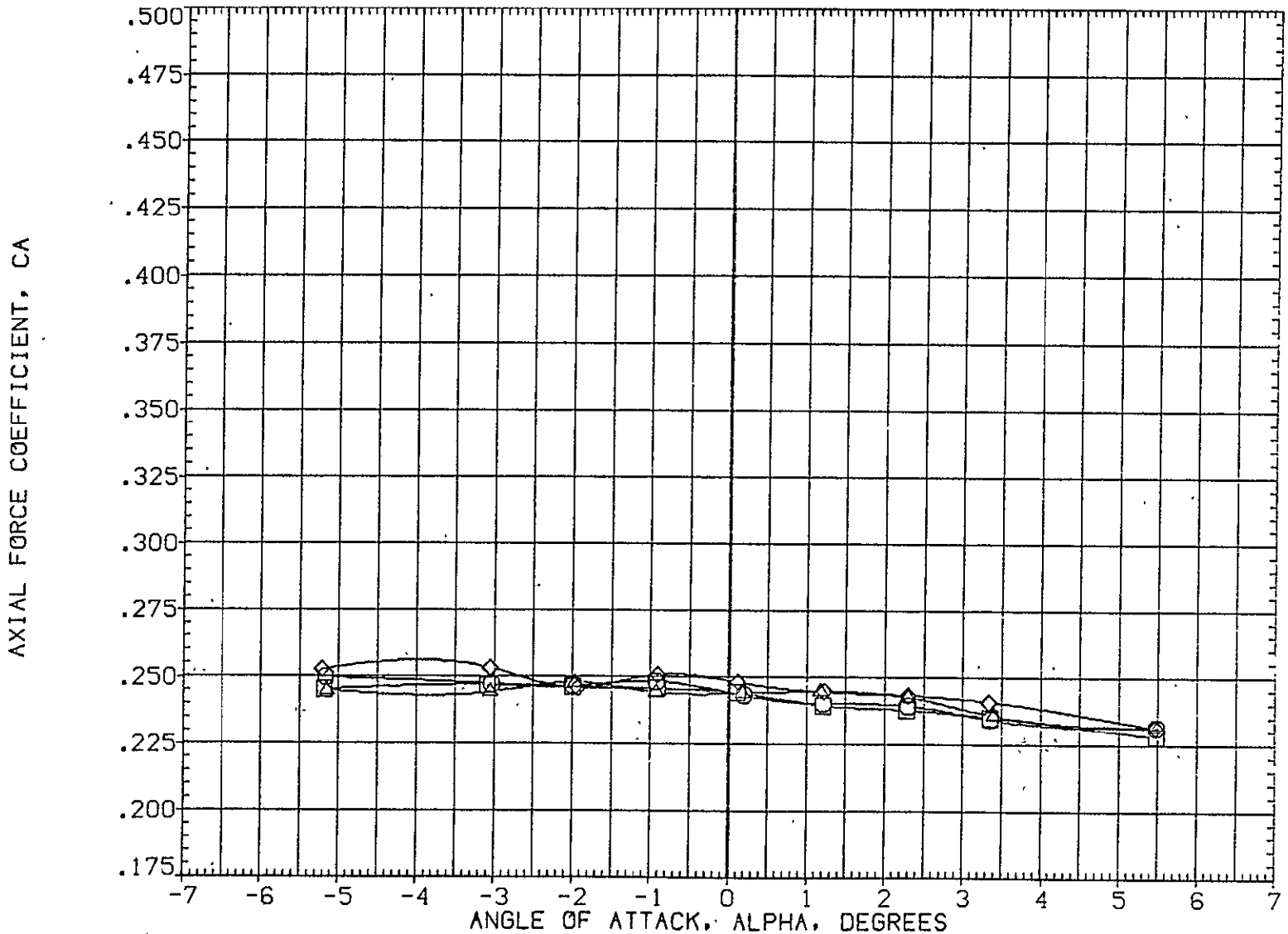


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L034)	□	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	◇	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	△	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

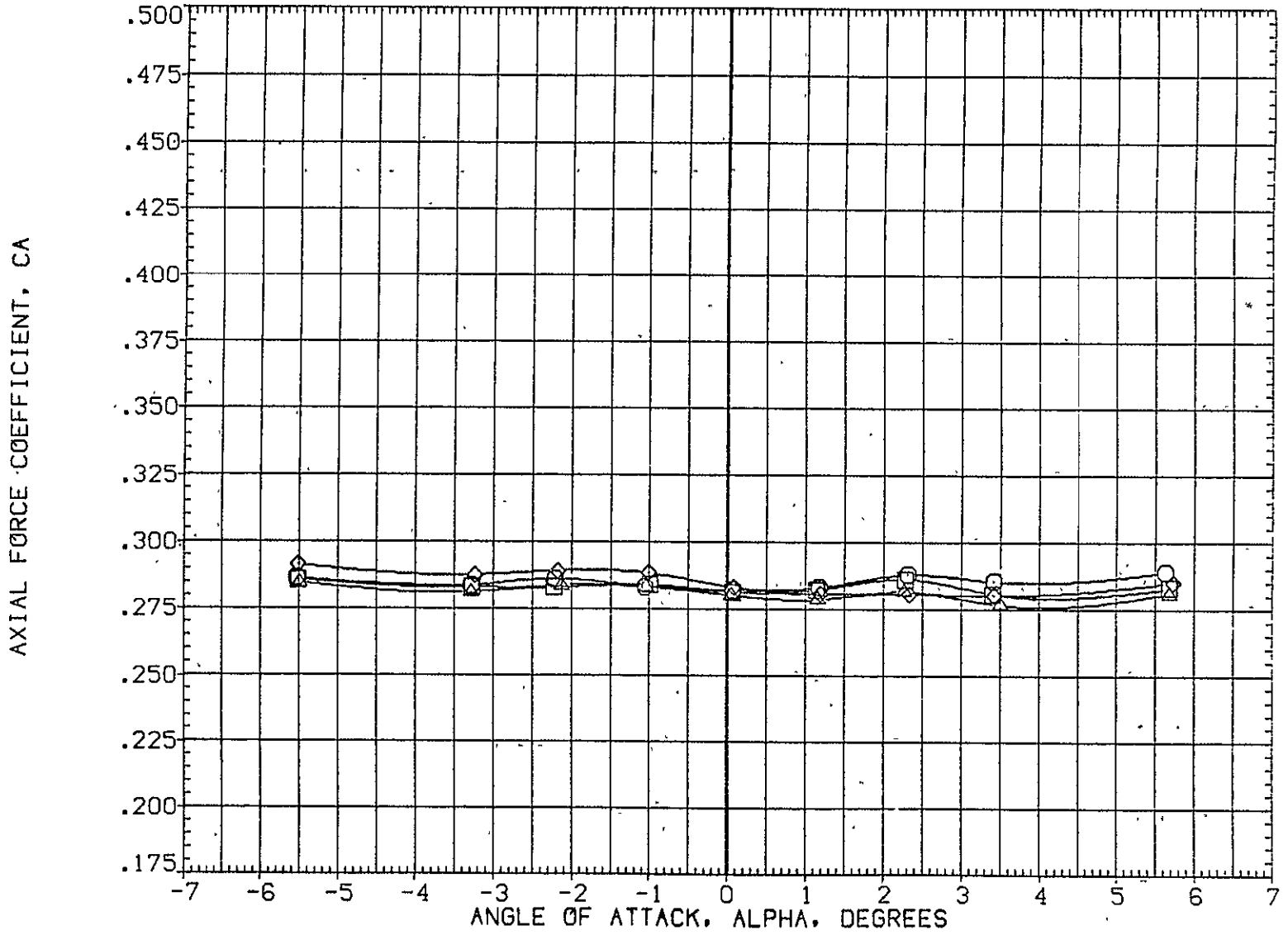


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L034)	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

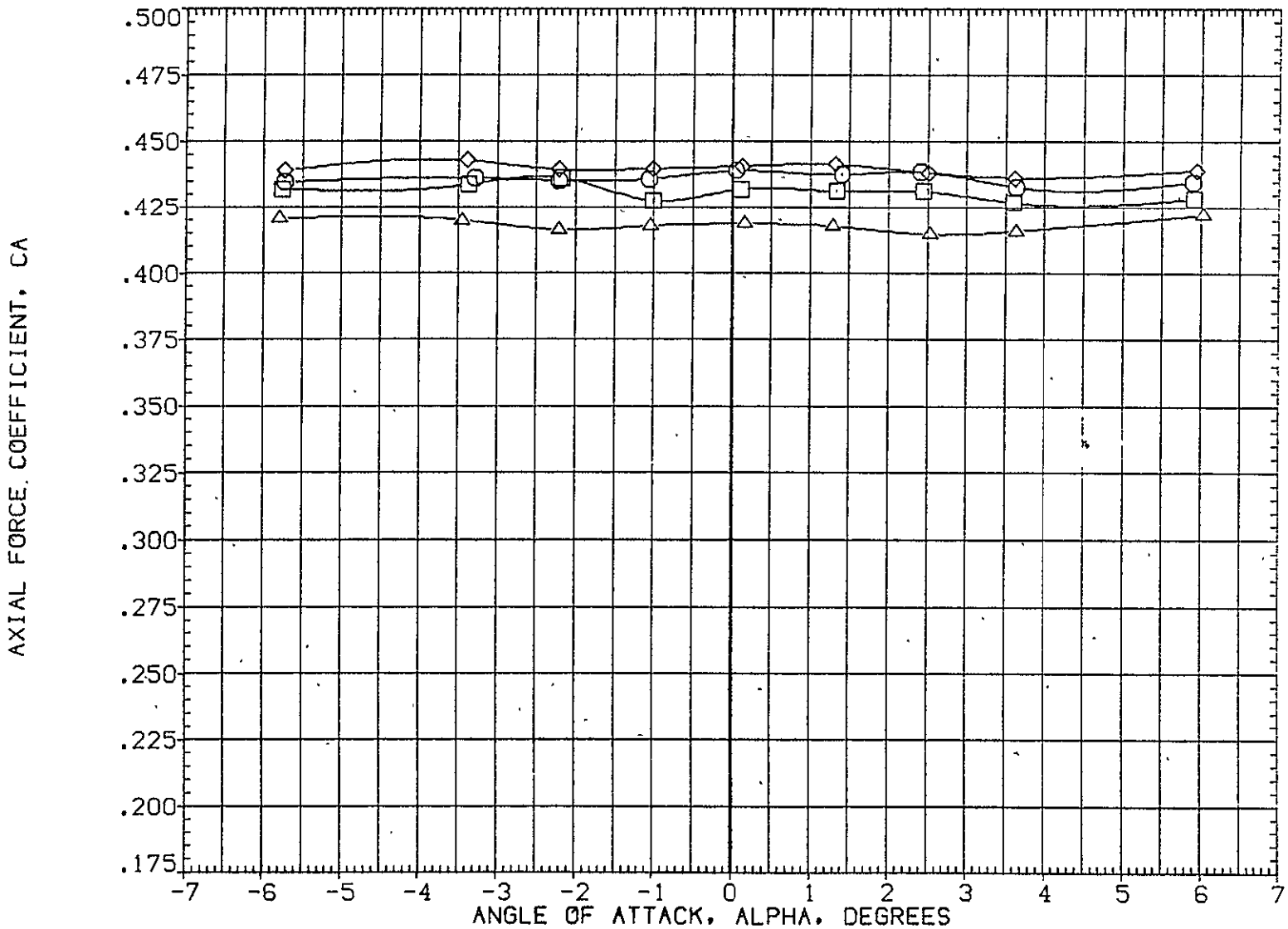


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L034)	□	MSFC TWT 600 (FA14)	02T2S1A1R1K1	.000	.000	90.000	.140
(A1L035)	◇	MSFC TWT 600 (FA14)	02T3S1A1R1K1	.000	.000	90.000	.140
(A1L036)	△	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

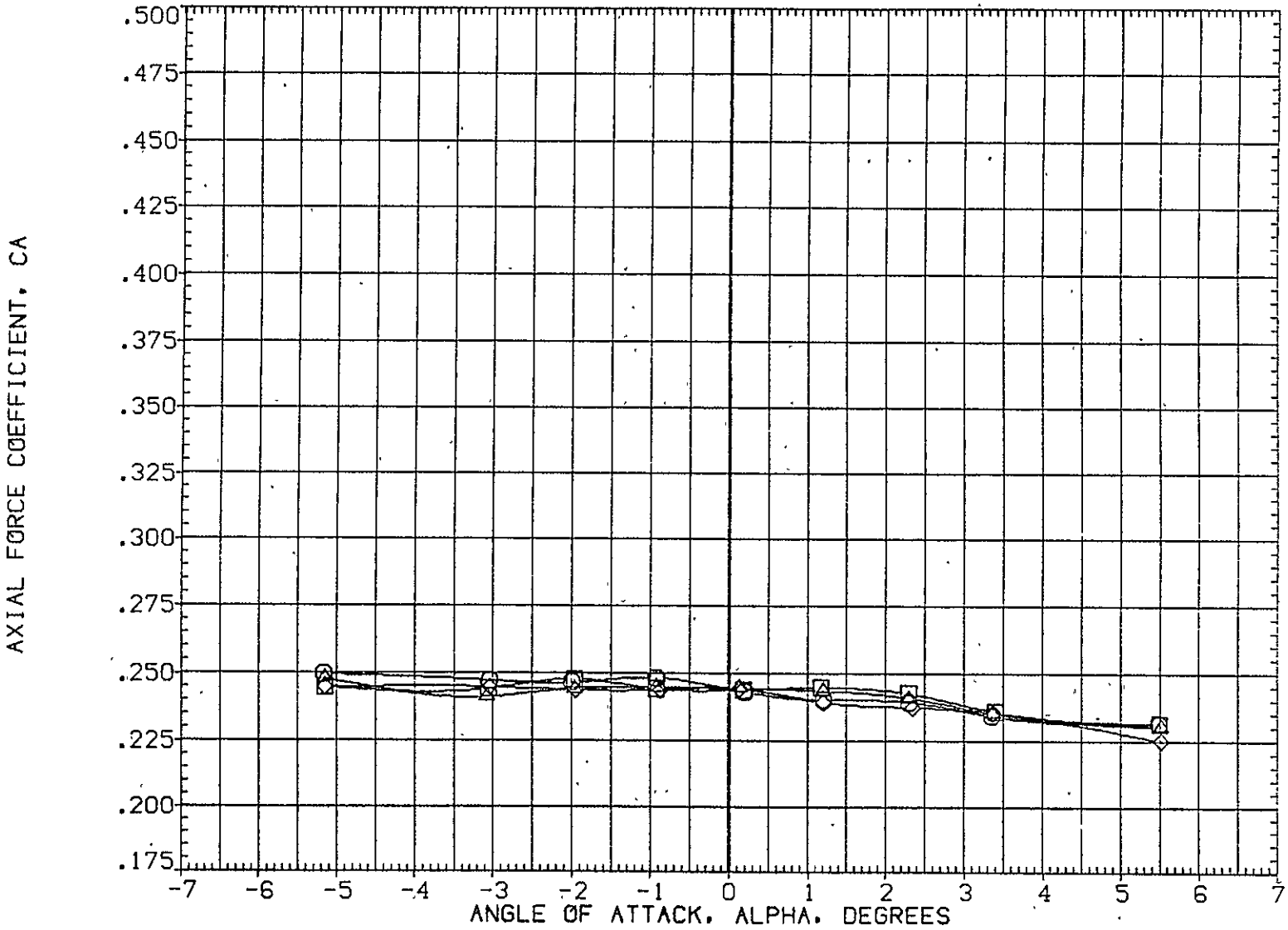


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L036)	◇	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140
(A1L037)	⋈	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	⋈	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

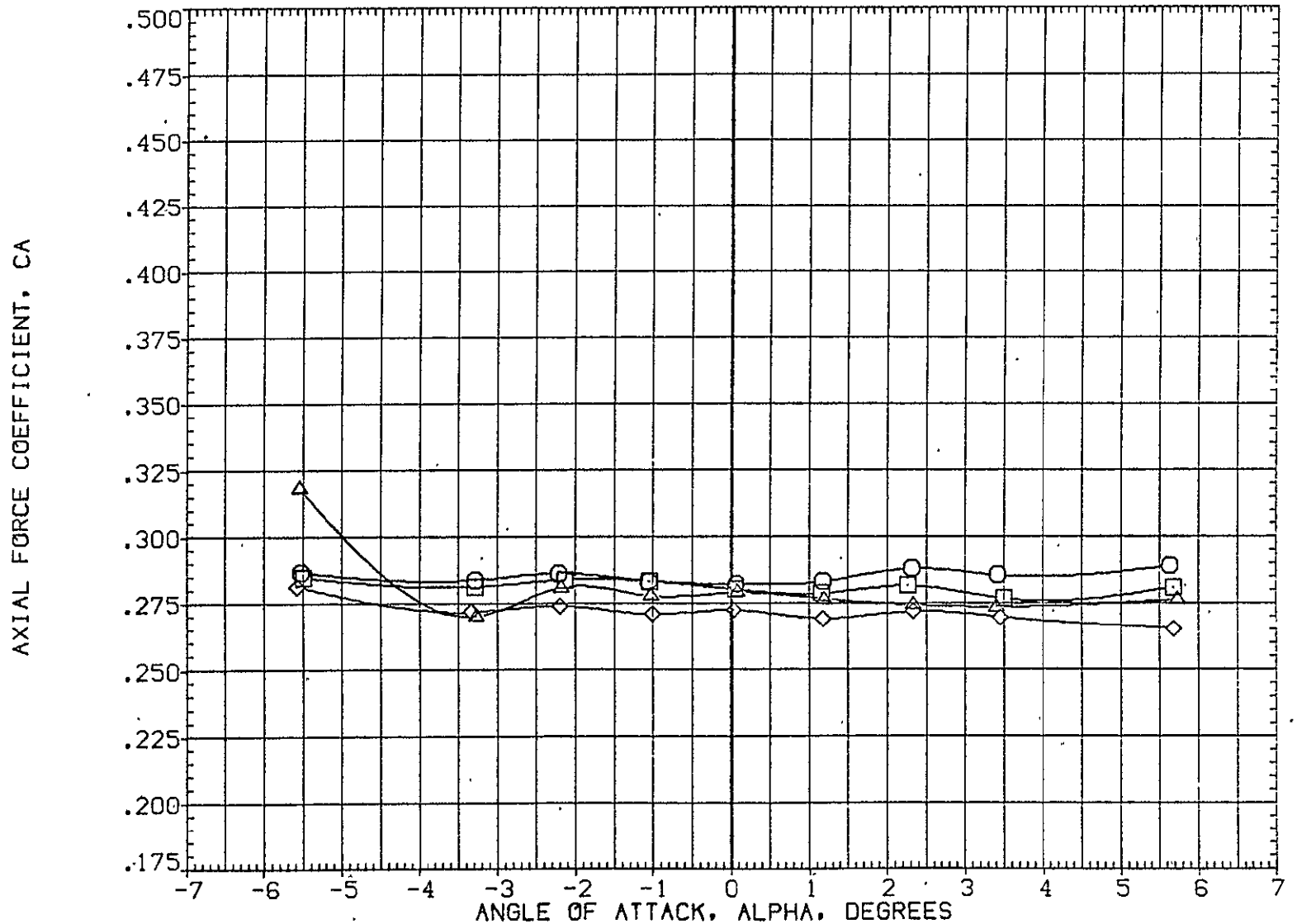


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L036)	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140
(A1L037)	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X
YMRP	.0000	IN. Y
ZMRP	.0000	IN. Z
SCALE	.0040	

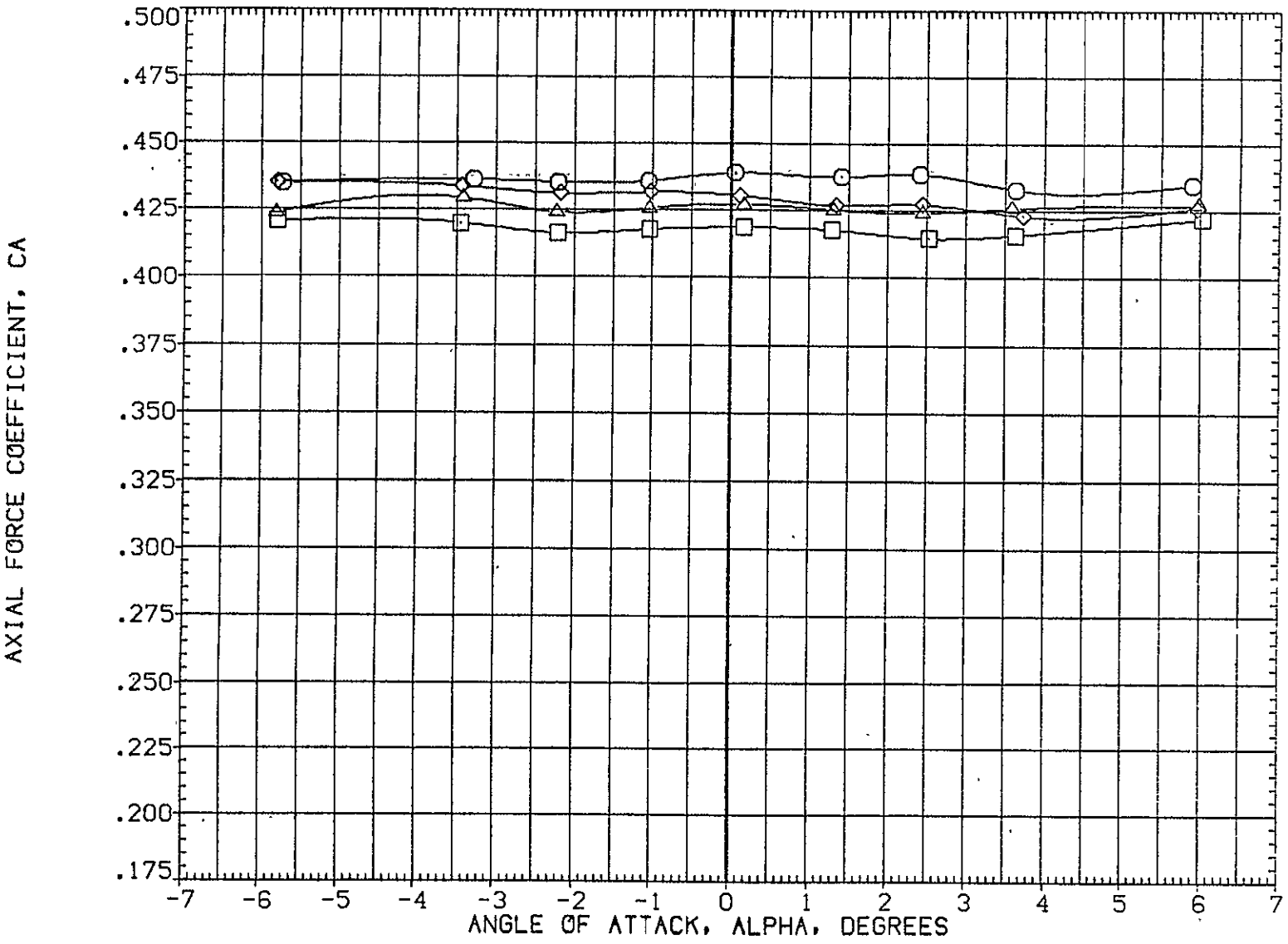


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L036)	□	MSFC TWT 600 (FA14)	02T1S2A1R1K1	.000	.000	90.000	.140
(A1L037)	◇	MSFC TWT 600 (FA14)	02T1S3A1R1K1	.000	.000	90.000	.140
(A1L038)	△	MSFC TWT 600 (FA14)	02T1S4A1R1K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

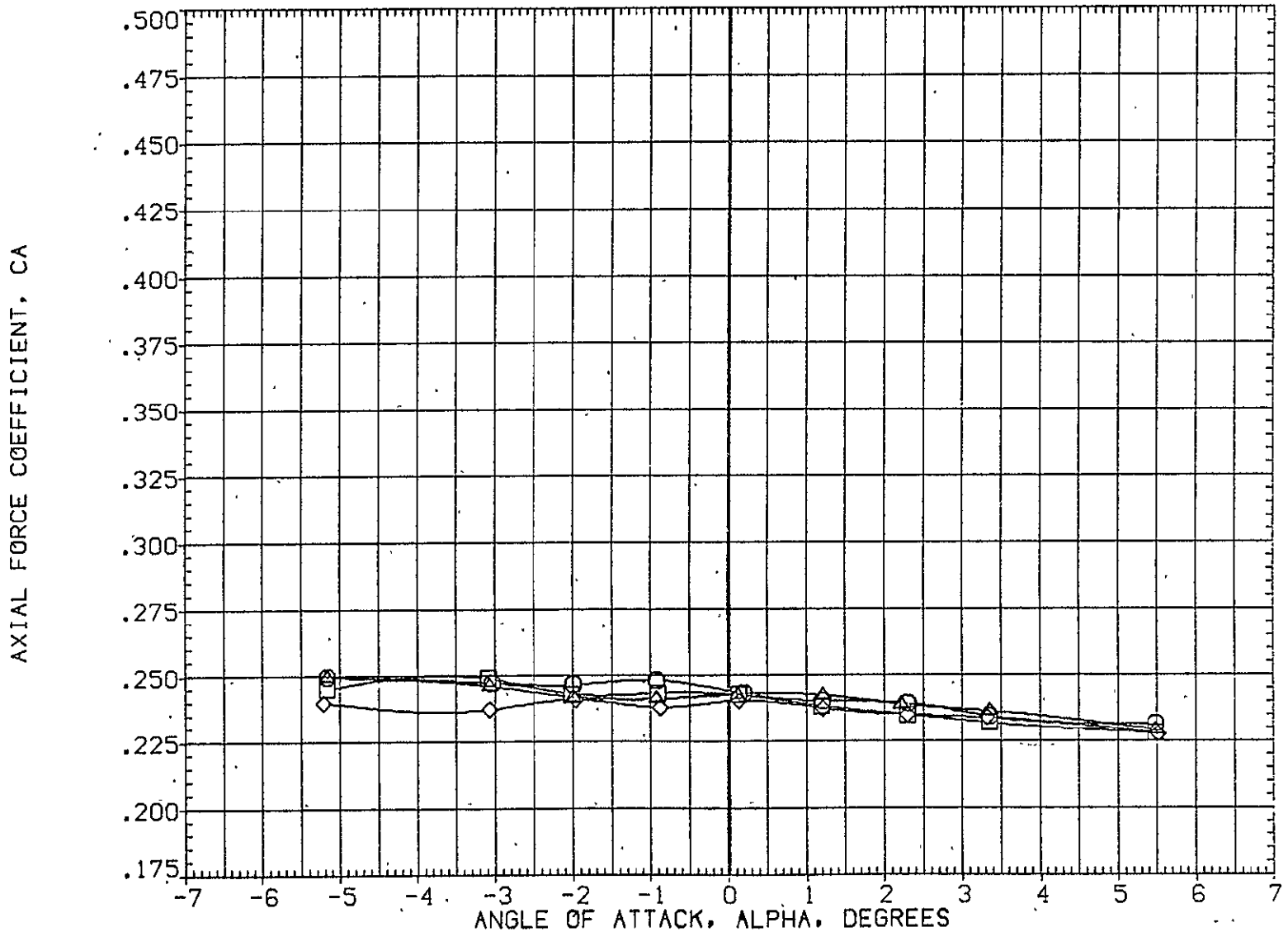


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO29)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AILO39)	□	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140
(AILO40)	⋈	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(AILO41)	△	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

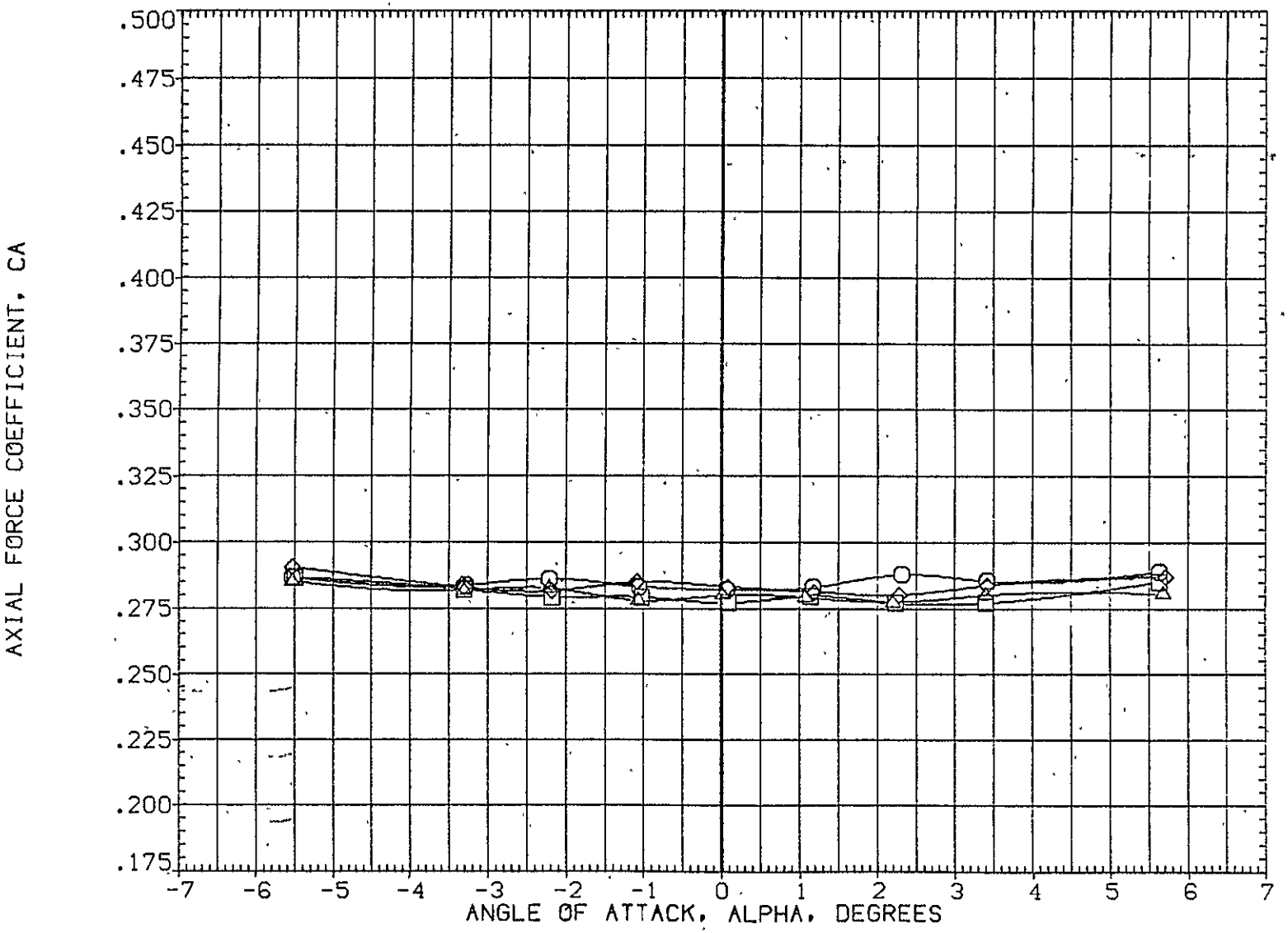


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L039)	□	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140
(A1L040)	◇	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	△	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

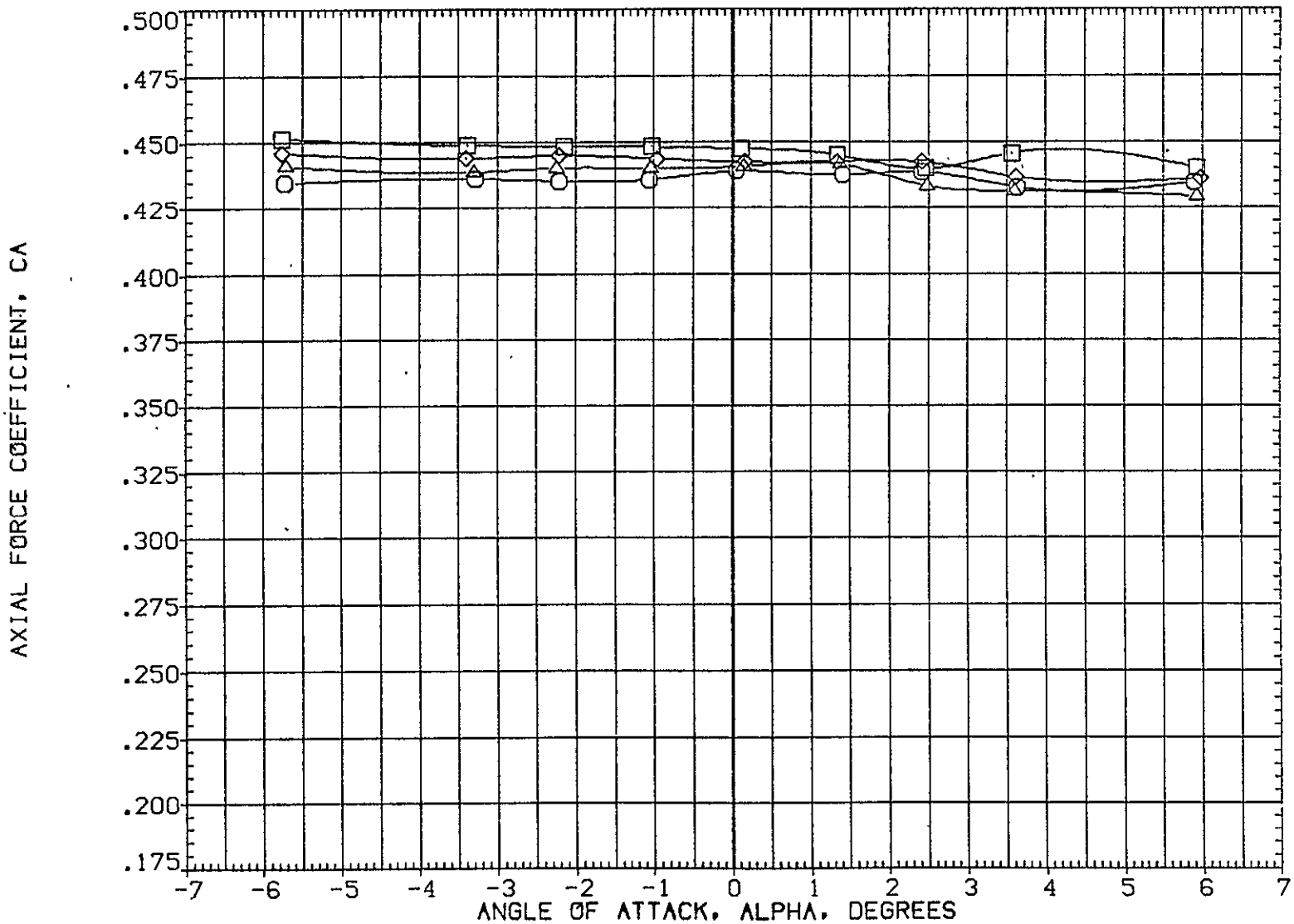


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1LO29)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1LO39)	□	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140
(A1LO40)	◇	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1LO41)	△	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

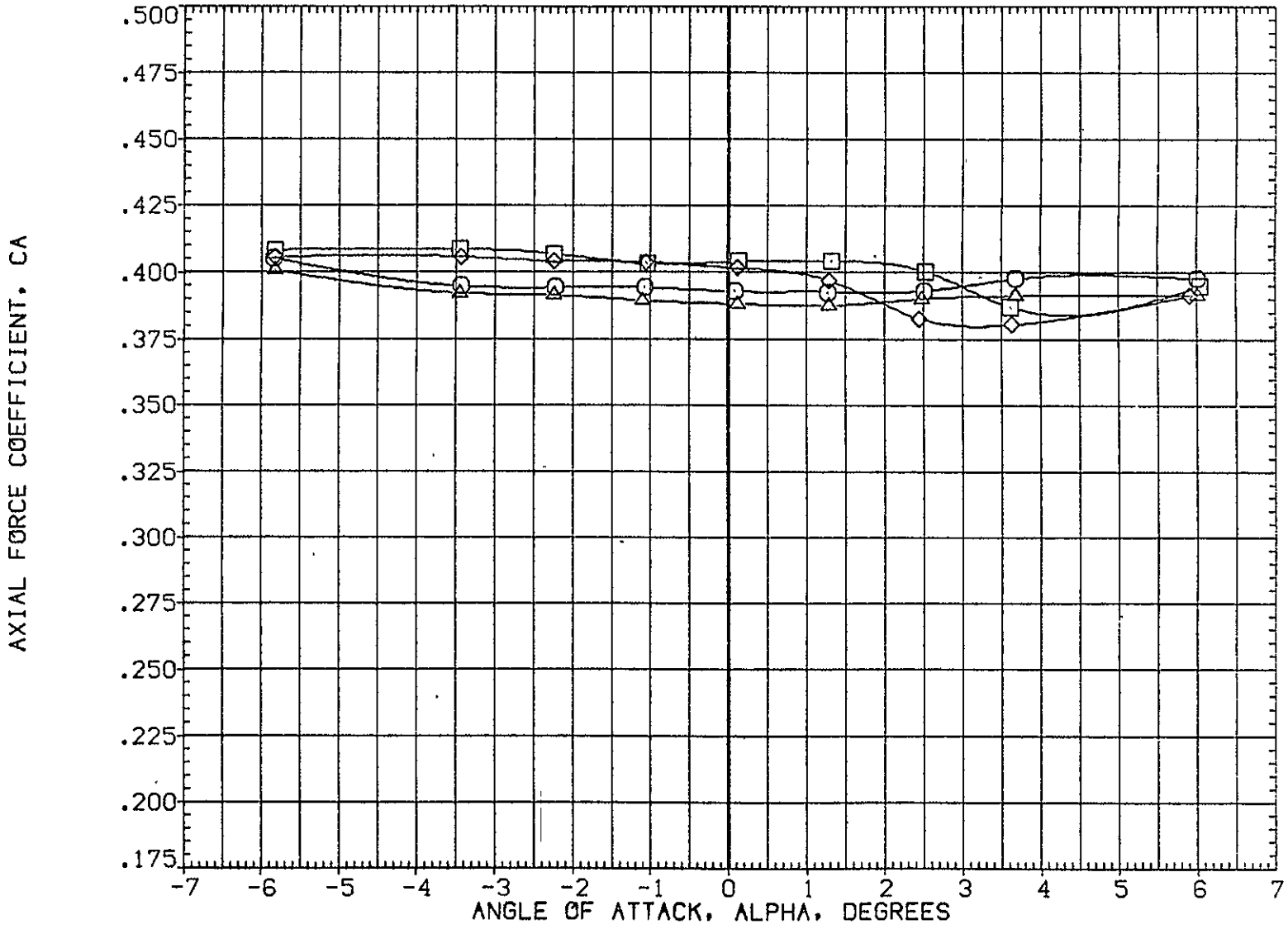


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L039)	□	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140
(A1L040)	◇	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	△	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

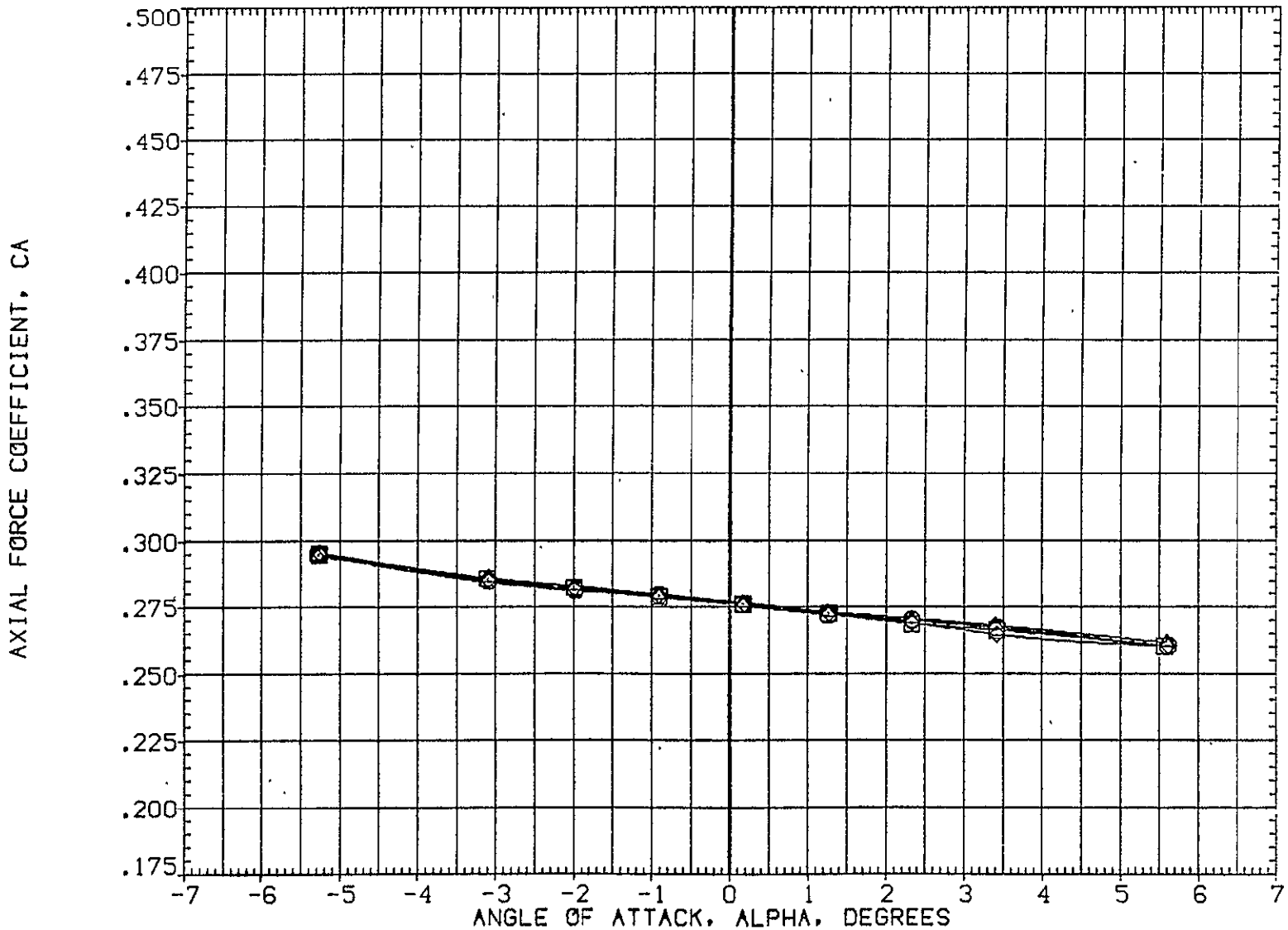


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L039)		MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140
(A1L040)		MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)		MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

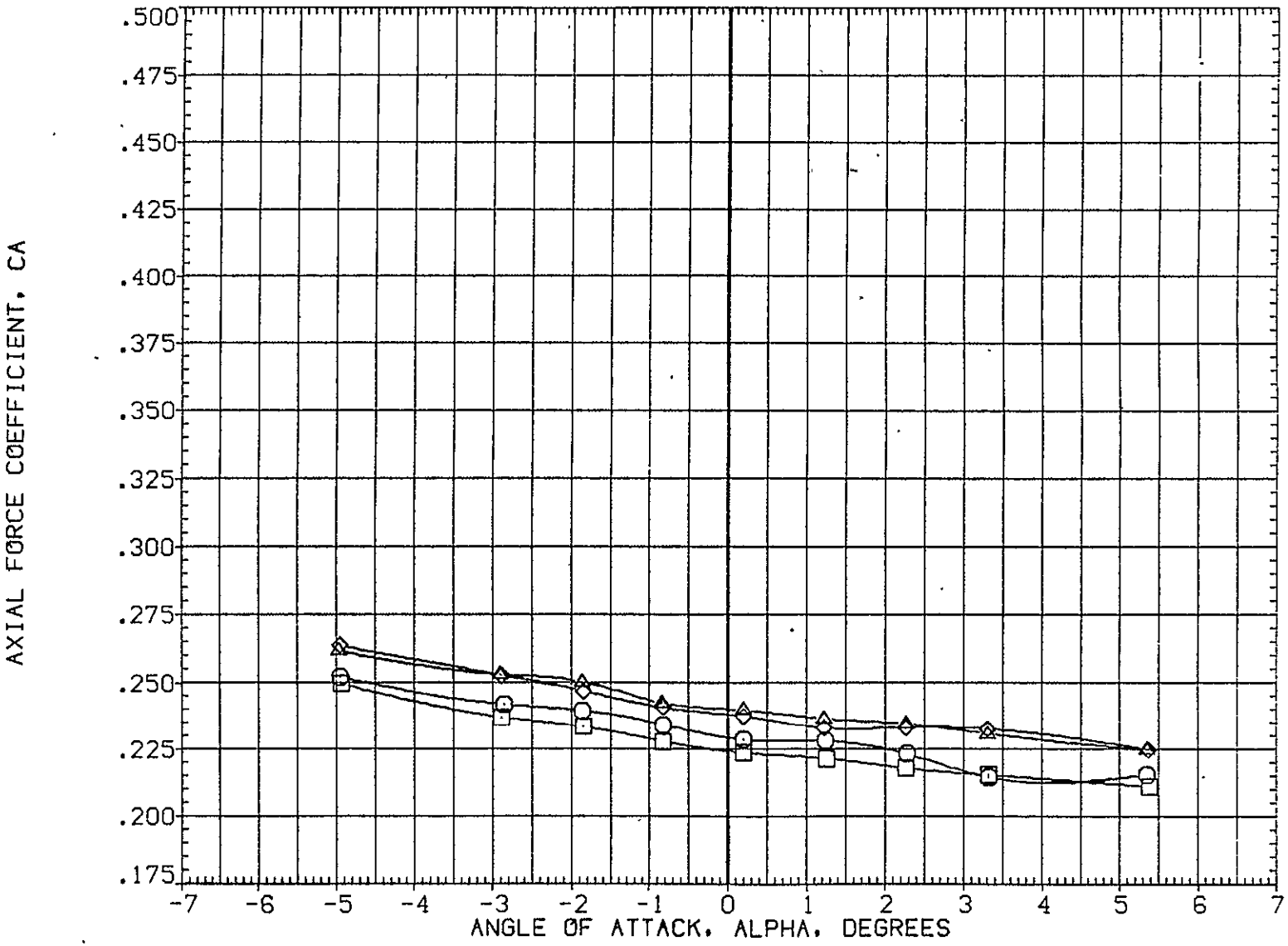


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 3.48

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L039)	□	MSFC TWT 600 (FA14)	02T1S1A2R1K1	.000	.000	90.000	.140
(A1L040)	◇	MSFC TWT 600 (FA14)	02T1S1A3R1K1	.000	.000	90.000	.140
(A1L041)	△	MSFC TWT 600 (FA14)	02T1S1A3R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

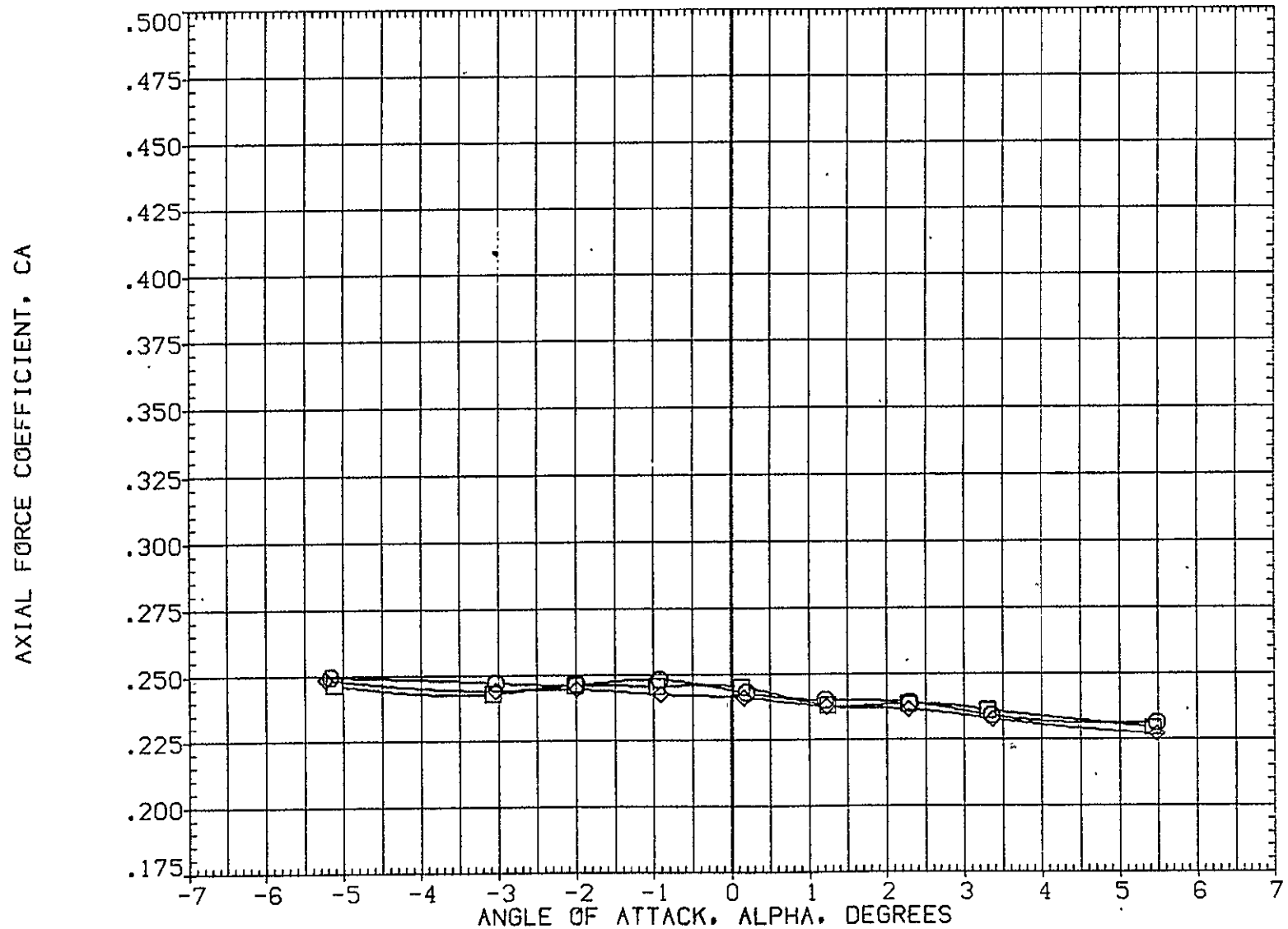


TOTAL AXIAL FORCE COMPARISONS

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)		MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L042)		MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140
(B1L043)		MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. X1
YMRP	.0000	IN. Y1
ZMRP	.0000	IN. Z1
SCALE	.0040	

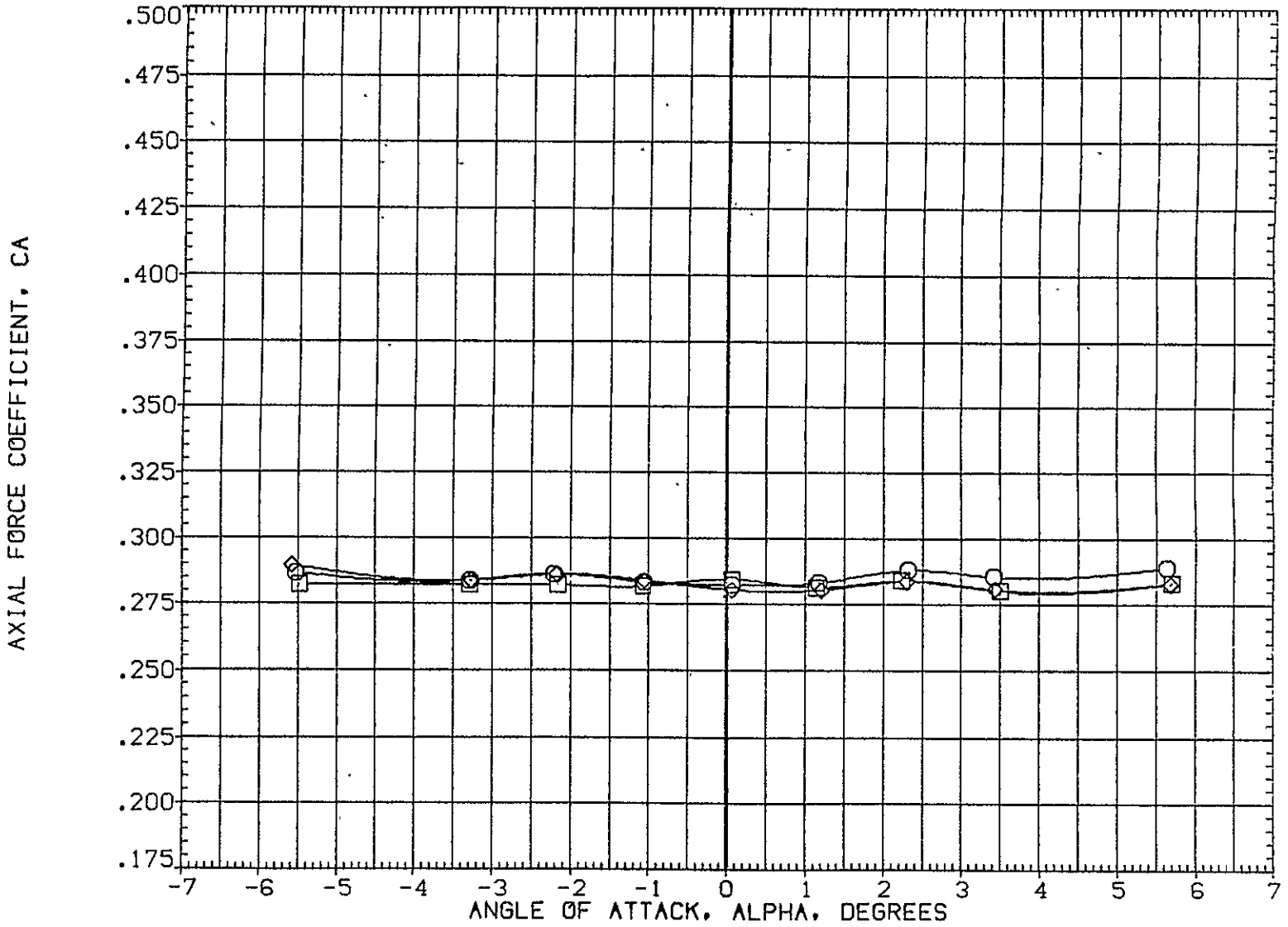


TOTAL AXIAL FORCE COMPARISONS

(A)MACH = .59

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(AILO29)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(AILO42)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140
(BILO43)	◇	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

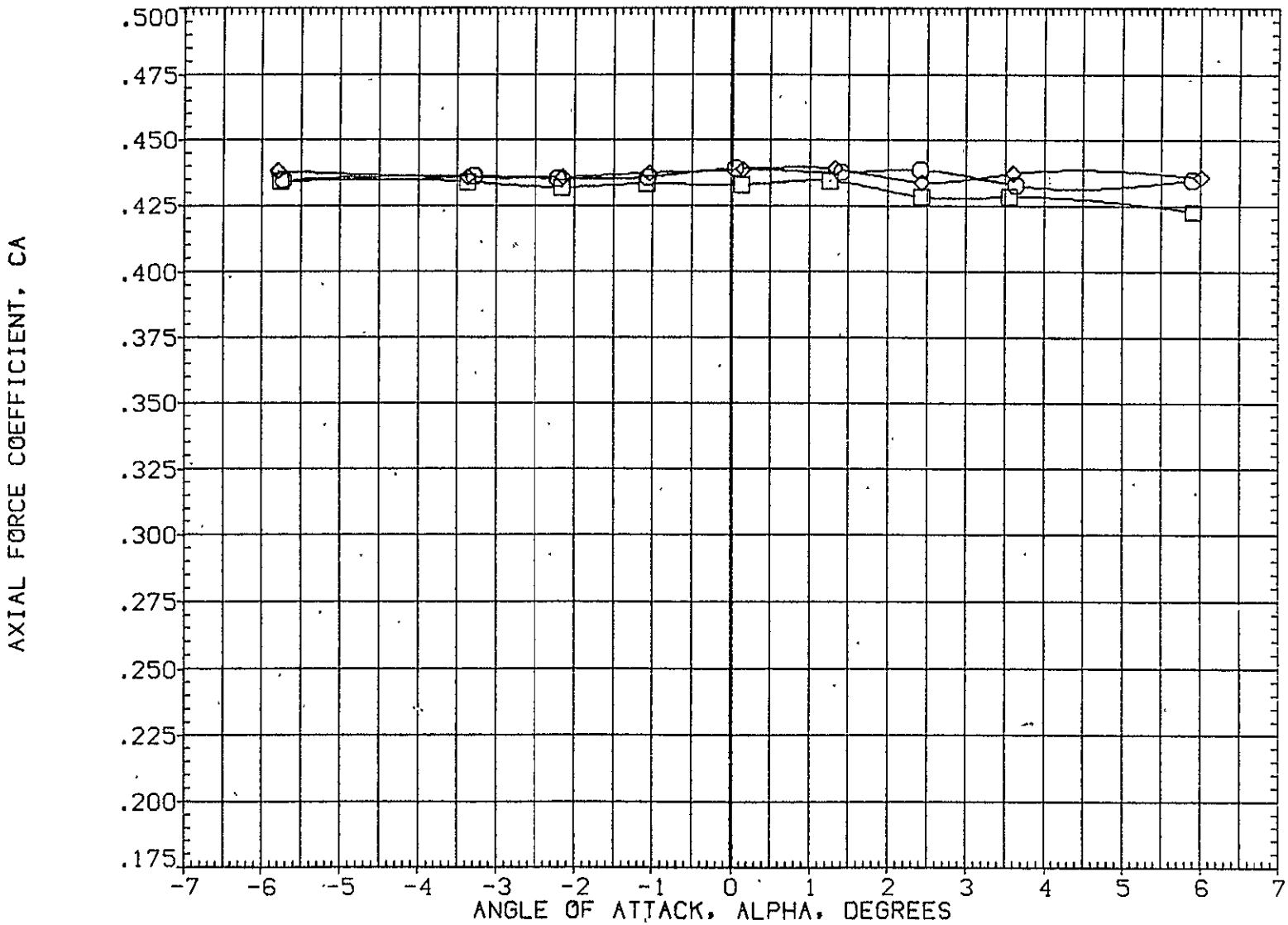


TOTAL AXIAL FORCE COMPARISONS

(B)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	□	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L042)	◇	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140
(B1L043)	◇	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

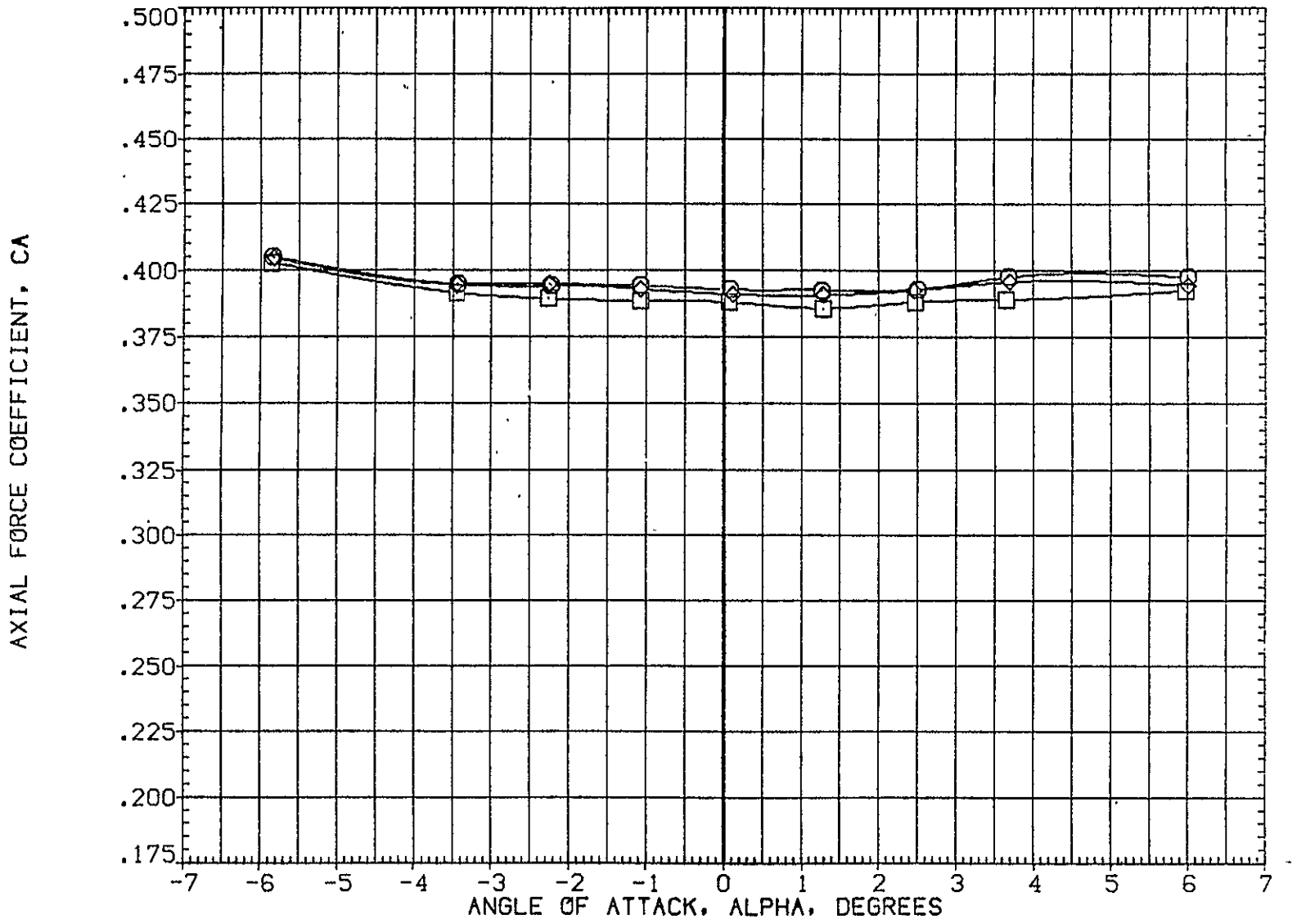


TOTAL AXIAL FORCE COMPARISONS

(C)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L042)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140
(B1L043)	◇	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION.		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

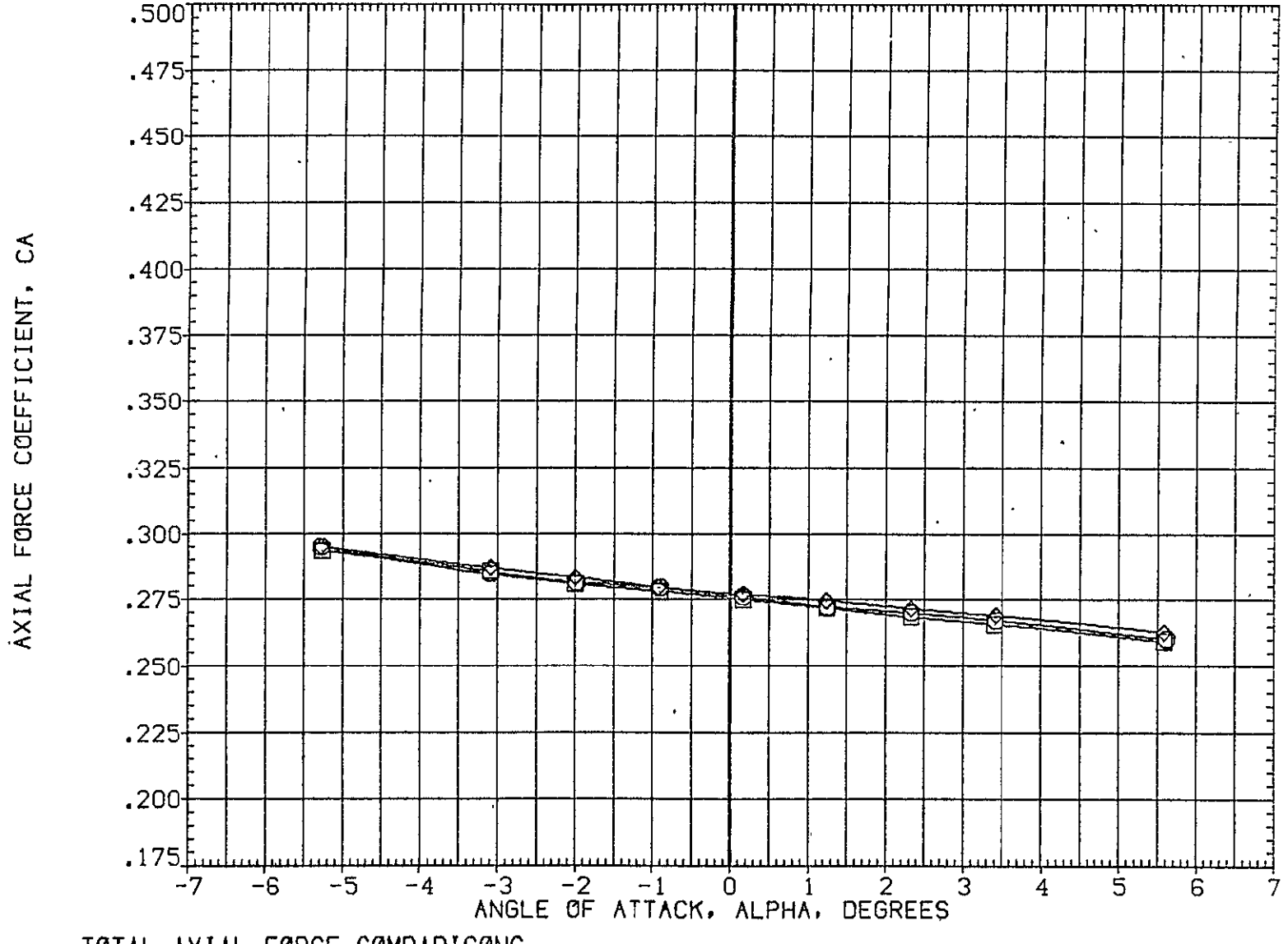


TOTAL AXIAL FORCE COMPARISONS

(D)MACH = 1.98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029)	○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L042)	□	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140
(B1L043)	◇	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	

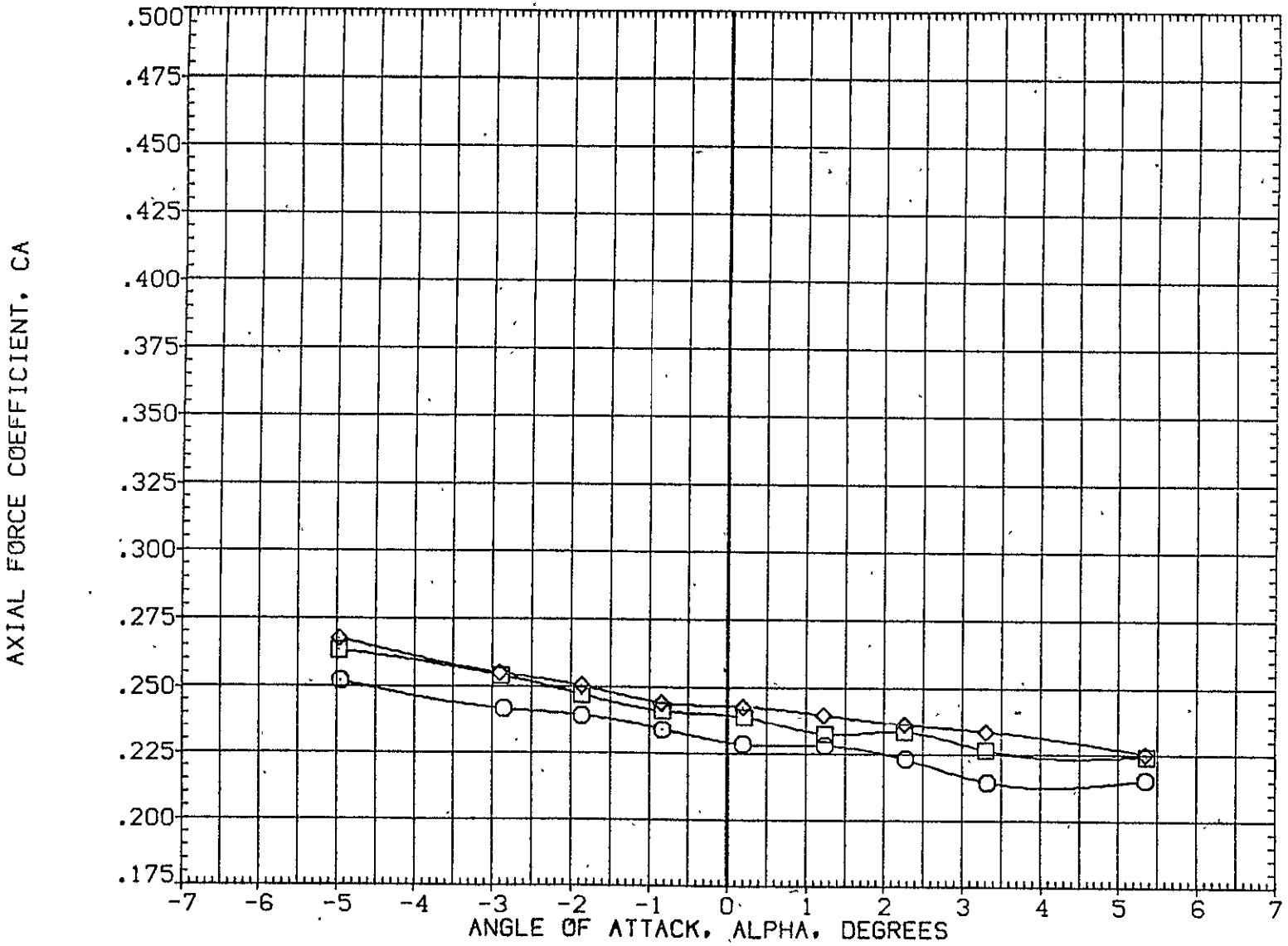


TOTAL AXIAL FORCE COMPARISONS

(E)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BETA	ORBINC	PHI-S	Z
(A1L029) ○	MSFC TWT 600 (FA14)	02T1S1A1R1K1	.000	.000	90.000	.140
(A1L042) □	MSFC TWT 600 (FA14)	02T1S1A3R2K1F18	.000	.000	90.000	.140
(B1L043) ◇	MSFC TWT 600 (FA14)	02T1S1A1R2K1	.000	.000	90.000	.140

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.0000	IN.
BREF	1290.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	.0000	IN. ZT
SCALE	.0040	



TOTAL AXIAL FORCE COMPARISONS

(F)MACH = 4.96

APPENDIX

TABULATED SOURCE DATA

Tabulations of plotted data are available on request from Data Management Services.

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MSFC TNT 600 (FA14) 01T1S1A1R1K1F1 (R1L001) , (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 1/ 0 RN/L = 4.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.597	-5.650	-.44900	.18180	-.01100	.00150	.00000	.13520	.27640	03460	.05880	.04780
.597	-3.540	-.33300	.13370	-.01160	.00120	.00030	.13800	.27280	.03280	.05590	.04510
.597	-2.470	-.27400	.11250	-.01580	.00310	.00060	.13970	.27090	03230	05460	.04430
.597	-1.410	-.21150	.08910	-.01890	.00450	.00050	.14020	.26980	.03180	.05530	.04250
.597	-.340	-.15390	.06880	-.01900	.00450	.00070	.13850	.26830	.03230	.05450	.04300
.597	-.340	-.15370	.06870	-.01890	.00520	.00100	.14020	.26820	.03210	.05420	.04170
.597	.710	-.09750	.04910	-.01900	.00520	.00120	.13700	.26660	.03190	.05340	.04430
.597	1.790	-.03280	.02840	-.02350	.00710	.00110	.13590	.26560	.03180	.05320	.04470
.597	2.900	.02770	.00940	-.02160	.00640	.00210	.13350	.26300	.03100	.05430	.04420
.597	5.000	.15060	-.03230	-.02200	.00680	.00300	.12280	.25570	.03240	.05520	.04530
	GRADIENT	.05645	-.01929	-.00113	.00063	.00030	-.00170	-.00184	-.00008	-.00018	.00013

RUN NO. 2/ 0 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.900	-5.990	-.45430	.17690	-.01880	.01170	-.00150	.15410	.33440	.04110	.06360	.07560
.900	-3.730	-.30390	.11550	-.02180	.01370	-.00150	.15700	.33560	.04100	.06330	.07430
.900	-2.620	-.23270	.08520	-.02440	.01560	-.00140	.15690	.33320	.04070	06280	.07280
.900	-1.520	-.16300	.05110	-.02420	.01600	-.00120	.15690	.32890	.03970	.06140	.07090
.900	-.400	-.09130	.01900	-.02450	.01580	-.00100	.15530	.32590	.03870	.06170	.07020
.900	-.410	-.09180	.01810	-.02580	.01700	-.00150	.15940	.33180	.03970	.06190	.07080
.900	.700	-.02630	-.00800	-.02770	.01760	-.00180	.15710	.32520	.03850	.06050	.06910
.900	1.830	.04930	-.03840	-.02530	.01560	-.00120	.15370	.31860	.03730	.05990	.06770
.900	2.960	.11340	-.06310	-.02770	.01650	-.00220	.15230	.31650	.03580	.06110	.06940
.900	5.190	.23850	-.10620	-.02720	01610	- 00150	.15340	.32020	.03710	.06290	.06580
	GRADIENT	.06260	-.02699	-.00074	.00032	-.00007	-.00065	-.00288	-.00066	-.00043	-.00114

RUN NO. 3/ 0 RN/L = 6.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
1.198	-6.200	-.49250	.20480	-.00580	.00230	.00000	.28180	.48250	.04650	.07330	.08090
1.198	-3.810	-.30560	.12590	-.00820	.00480	-.00020	.28550	.48100	.04660	.07030	.07860
1.198	-2.640	- 22320	.09170	-.01160	.00740	-.00070	.28890	.48140	04640	.06830	.07780
1.198	-1.470	-.14230	.05870	- 01630	.00910	-.00150	.28880	.47980	.04670	.06670	.07760
1.198	-.290	-.06210	.02670	-.01730	.00840	-.00140	.28850	.48100	.04800	.06720	.07730
1.198	-.280	-.05980	.02660	-.01730	.00840	-.00140	.28890	.48000	.04760	.06610	.07740
1.198	.850	.01030	-.00370	-.01550	.00770	-.00080	.28540	.47980	.04870	.06740	.07730
1.198	2.000	.08220	-.03290	-.01490	.00690	-.00080	.28450	.47660	.04830	.06700	.07680
1.198	3.170	.15210	-.06290	-.01520	.00660	-.00070	.28060	.47490	.04920	.06800	.07710
1.198	5.470	.29940	-.12130	-.02020	.00870	-.00090	.27880	.47340	.05000	.05920	.07540
	GRADIENT	.06567	-.02699	-.00083	.00009	-.00003	-.00079	-.00086	00042	-.00027	-.00021

MSFC THT 600 (FA14) OITISIAIRIKIFI (RILOOI) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 98/ 0 RN/L = 8.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
3.479	-5.760	-.33860	.13860	-.00200	-.00070	-.00070	.26530	.31250	.01310	.01650	.01760
3.479	-3.550	-.24290	.10790	-.00230	-.00010	-.00060	.25430	.30060	01310	.01620	.01700
3.479	-2.490	-.19950	.09370	-.00630	.00170	-.00070	.25110	.29720	01300	.01610	.01700
3.479	-1.410	-.15480	.07970	-.00720	.00200	-.00070	.24680	.29260	.01320	.01580	.01680
3.479	-.320	-.11170	.06640	-.00730	.00310	-.00080	.24400	.28920	.01320	.01540	.01660
3.479	-.320	-.11160	.06660	-.00800	.00320	-.00070	.24650	.29140	.01310	.01530	.01650
3.479	.750	-.06720	.05280	-.00700	.00200	-.00070	.23960	.28440	.01330	.01520	.01630
3.479	1.830	-.02620	.04010	-.01120	.00350	-.00030	.23560	.28030	.01320	.01540	.01610
3.479	2.930	.01800	.02340	-.00860	.00220	-.00060	.23180	.27560	.01310	.01510	.01560
3.479	5.070	.11080	-.00890	-.01000	.00310	-.00070	.22610	.26820	.01370	.01400	.01440
	GRADIENT	.04024	-.01282	-.00094	.00035	.00003	-.00350	-.00387	.00002	-.00018	-.00022

RUN NO. 97/ 0 RN/L = 5.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
4.959	-5.440	-.29680	.12030	-.00090	.00240	-.00070	.25730	.27780	.00560	.00760	.00730
4.959	-3.350	-.22320	.10090	-.00160	.00220	.00020	.24540	.26580	.00500	.00780	.00760
4.959	-2.330	-.17860	.08620	-.00770	.00390	-.00030	.23820	.25970	.00600	.00790	.00760
4.959	-1.310	-.14700	.07620	-.00210	.00100	-.00070	.23520	.25620	.00560	.00790	.00750
4.959	-.270	-.11030	.06640	.01360	-.00540	-.00070	.22860	.25010	.00600	.00790	.00760
4.959	-.270	-.10540	.06430	-.00840	.00220	-.00060	.22610	.24700	.00600	.00770	.00720
4.959	.750	-.07680	.05760	-.00270	.00090	-.00060	.22300	.24350	.00550	.00770	.00730
4.959	1.780	-.04110	.04920	-.00900	.00340	-.00060	.21990	.24040	.00560	.00760	.00730
4.959	2.840	-.00580	.04160	-.00940	.00380	-.00060	.21360	.23440	.00610	.00750	.00720
4.959	4.890	.07900	.01090	-.01130	.00250	.00050	.20790	.22700	.00490	.00740	.00680
	GRADIENT	.03557	-.01011	-.00119	.00016	00003	-.00457	-.00475	-.00002	-.00006	-.00009

MSFC THT 600 (FA14) O1T1S1A1R1K1F2 (R1L002) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 6/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.600	-5.660	-.44370	.17710	-.01490	.00890	.00060	.13080	.27370	.03480	.05940	.04870
.600	-3.550	-.32410	.13000	-.01360	.00890	.00110	.13500	.27450	.03550	.05810	.04590
.600	-2.470	-.26600	.10830	-.01560	.00990	.00070	.13210	.27300	.03500	.05760	.04830
600	-1.420	-.20710	.08680	-.01670	.01000	.00090	.13130	27060	.03460	05660	.04810
.600	-.340	-.14930	.06690	-.01680	.01040	.00110	.13430	.26940	.03380	.05550	.04580
.600	-.340	-.14740	.06570	-.01470	.00930	.00100	.13150	.26970	.03430	.05710	.04660
.600	.720	-.08960	.04660	-.01890	.01200	.00130	.13220	.26980	.03400	.05590	.04770
.600	1.800	-.02490	.02580	-.02120	.01270	.00130	.12980	.26530	.03310	.05500	.04740
.600	2.900	.04290	.00340	-.01730	.01110	.00190	.12490	.26120	.03250	.05520	04850
.600	5.000	.16310	-.03670	-.02390	.01350	.00200	.11940	.25420	.03190	.05650	.04640
	GRADIENT	.05717	-.01943	-.00104	.00051	.00014	-.00162	-.00228	-.00043	-.00026	.00003

RUN NO. 5/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.904	-5.990	-.44830	.17360	-.01340	.00770	.00000	.14630	.32670	.03980	.06550	.07510
.904	-3.800	-.29790	.09950	-.01660	.00990	-.00030	.14910	.32670	03950	.06300	.07510
.904	-2.680	-.22700	.06490	-.02000	.01140	-.00090	.15140	.32460	.03820	.06110	.07390
.904	-1.570	-.16070	.03940	-.02010	.01060	-.00080	.15290	.31970	.03700	.06170	.06810
.904	-.420	-.08660	.00970	-.02230	.01190	-.00110	.15290	.31840	.03680	.06080	.06790
.904	-.420	-.08770	.01110	-.02230	.01180	-.00120	.15310	.31790	03650	.06040	06790
.904	.690	-.01290	-.02220	-.02180	.01180	-.00120	.15370	.31730	.03680	.06000	.06680
.904	1.810	.06070	-.05210	-.02050	.01060	-.00120	.15150	.31380	.03630	.06040	.06560
.904	2.960	.12400	-.07360	-.01970	.00920	-.00170	.14700	.30980	.03660	06030	.06590
.904	5.200	.23850	-.09580	-.02280	.00970	-.00160	.14430	.30890	.03610	.06300	.06550
	GRADIENT	.06310	-.02585	-.00038	-.00008	-.00017	-.00017	-.00237	-.00040	-.00036	-.00144

RUN NO. 4/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
1.197	-6.180	-.48160	.20030	-.00330	.00140	.00000	.27520	.47840	.04730	.07420	.08170
1.197	-3.820	-.29950	.12350	-.00960	.00540	-.00050	.27970	.47600	.04670	.07110	.07850
1.197	-2.630	-.21720	.08950	-.01130	.00630	-.00070	.28200	.47550	.04640	.06950	07760
1.197	-1.470	-.13720	.05700	-.01730	.00920	-.00130	.28360	.47480	.04700	.06700	.07720
1.197	-.310	-.06330	.02260	-.01630	.00890	-.00070	.28050	.47550	.04870	.06750	.07880
1.197	-.310	-.06120	.02210	-.01620	.00950	-.00060	.28180	.47580	.04840	.06680	.07880
1.197	.820	.00950	-.01040	-.01550	.00740	-.00060	.28010	.47290	.04770	.06780	.07730
1.197	1.960	.08120	-.03770	-.01440	.00700	-.00050	.27800	.47060	.04810	.06770	.07690
1.197	3.160	.15530	-.06750	-.01590	.00660	-.00070	.27640	.46970	.04840	.06890	.07600
1.197	5.450	.30000	-.12210	-.01680	.00670	-.00050	.27300	.46770	.04990	.07030	.07450
	GRADIENT	.06504	-.02761	-.00072	.00010	.00001	-.00066	-.00094	.00028	-.00029	-.00028

MSFC TWT 600 (FA14) 01TIS1A1R1K1F2 (R1L002) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 99/ 0 RN/L = 6.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
3.479	-5.760	-.34130	.14020	-.00050	.00020	-.00030	.25970	.30670	.01250	.01640	.01810
3.479	-3.560	-.24310	.10620	-.00080	-.00020	-.00020	.24820	.29440	.01280	.01600	.01740
3.479	-2.490	-.19580	.09070	-.00210	.00110	-.00010	.24500	.29070	.01240	.01600	.01730
3.479	-1.410	-.15180	.07760	.00340	-.00110	-.00040	.24160	.28690	.01250	.01570	.01710
3.479	-.310	-.10550	.06440	-.00280	.00090	-.00030	.23900	.28410	.01270	.01550	.01690
3.479	-.310	-.10670	.06540	-.00270	.00140	-.00010	.23960	.28440	.01240	.01540	.01700
3.479	.760	-.06340	.05360	-.00250	.00070	.00000	.23670	.28120	.01240	.01530	.01680
3.479	1.840	-.02420	.04160	-.00220	.00000	.00000	.23430	.27850	.01250	.01510	.01660
3.479	2.950	.02400	.02500	-.00170	-.00060	.00000	.23190	.27520	.01270	.01470	.01590
3.479	5.100	.11840	-.00740	-.00390	.00030	.00020	.22640	.26860	.01300	.01390	.01530
	GRADIENT	.04061	-.01205	-.00029	-.00005	.00004	-.00248	-.00289	-.00001	-.00020	-.00020

RUN NO. 100/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
4.959	-5.430	-.29060	.11790	.00190	.00090	-.00120	.25020	.27120	.00600	.00760	.00740
4.959	-3.350	-.22020	.09920	-.00010	.00140	-.00080	.23850	.25920	.00550	.00780	.00740
4.959	-2.330	-.17910	.08590	-.00190	.00100	-.00060	.23260	.25330	.00540	.00790	.00740
4.959	-1.300	-.13820	.07320	-.00050	.00090	-.00060	.22790	.24920	.00560	.00800	.00770
4.959	-.270	-.10580	.06620	-.00250	.00090	-.00080	.22410	.24510	.00590	.00780	.00730
4.959	-.270	-.10870	.06790	-.00250	.00140	-.00060	.22420	.24510	.00600	.00760	.00730
4.959	.760	-.06790	.05680	-.00310	.00000	-.00070	.22080	.24110	.00500	.00770	.00760
4.959	1.790	-.02990	.04640	-.00180	.00050	-.00070	.21760	.23770	.00520	.00750	.00740
4.959	2.850	.01130	.03410	-.00350	.00110	.00000	.21440	.23520	.00570	.00750	.00760
4.959	4.890	.08410	.01170	-.00120	-.00100	.00020	.20930	.22850	.00470	.00730	.00720
	GRADIENT	.03673	-.01029	-.00018	-.00022	.00011	-.00346	-.00363	-.00008	-.00008	-.00001

MSFC TWT 600 (FA14) 01T1S1A1R1K1F3 (RIL003) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 7/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.599	-5.660	-.44620	.17890	-.00890	.00590	.00150	.27420	.13050	.03500	.05880	.04980
.599	-3.550	-.32500	.13070	-.01170	.00750	.00140	.27300	.13180	.03620	.05770	.04720
.599	-2.460	-.26410	.10850	-.01070	.00680	.00170	.27120	.13120	.03500	.05730	.04750
.599	-1.410	-.20170	.08620	-.01380	.00880	.00180	.27050	.13150	.03460	.05640	.04790
.599	-.330	-.14580	.06630	-.01070	.00780	.00190	.26860	.13130	.03410	.05690	.04610
.599	.730	-.08520	.04640	-.01610	.00980	.00180	.26700	.13170	.03350	.05610	.04560
.599	1.790	-.03160	.02970	-.01630	.01020	.00190	.26530	.12930	.03340	.05580	.04670
.599	2.900	.03870	.00670	-.01670	.00990	.00220	.26160	.12650	.03320	.05510	04670
.599	5.020	.15990	-.03280	-.01920	.01140	.00280	.25630	.11920	.03240	.05600	.04870
.599	-.330	-.14420	.06680	-.01190	.00800	.00180	.26980	.13140	.03460	.05540	.04840
	GRADIENT	.05578	-.01899	-.00095	.00050	.00009	-.00165	-.00065	-.00044	-.00037	-.00018

RUN NO. 8/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.899	-5.980	-.44810	.17640	-.01150	.00540	.00070	32580	.14680	.03980	.06600	.07310
.899	-3.720	-.29630	.11260	-.01370	.00740	.00050	32190	.14820	.03870	.06410	.07080
.899	-2.620	-.22770	.08030	-.01130	.00670	.00070	.31750	.15100	.03710	.06150	.06780
.899	-1.530	-.16150	.05100	-.01570	.00890	.00030	.31880	.15340	.03700	.06010	.06810
.899	-.390	-.09330	.02430	-.01560	.00840	.00000	.31630	.15320	.03640	.06070	.06580
.899	.720	-.02250	-.00460	-.01670	.00840	.00050	.31240	.15120	.03600	.05960	06550
.899	1.840	.04900	-.03420	-.01410	.00680	.00050	.31170	.15270	.03570	.05900	.06420
.899	2.980	.11280	-.05820	-.01600	00710	-.00020	.30750	.14910	.03500	05920	.06400
.899	5.200	.23420	-.09060	-.02030	.00840	-.00070	.31110	.14750	.03550	.06300	.06490
.899	-.390	-.09370	.02460	-.01570	.00840	.00000	.31760	.15300	.03680	.06110	.06650
	GRADIENT	.06139	-.02548	-.00043	-.00004	-.00007	-.00196	.00012	-.00048	-.00064	-.00097

RUN NO. 9/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.200	-6 170	-.48070	.20160	-.00360	.00020	-.00010	.47510	.27210	.04790	.07390	.08110
1.200	-3.810	-.30170	.12820	-.00970	.00380	-.00050	.47350	.27650	.04690	.07100	.07900
1.200	-2.610	-.21920	.09440	-.01030	.00470	-.00070	.47350	.27850	.04890	.07010	.07780
1.200	-1.460	-.13850	.06190	-.01210	00530	-.00060	.47260	.28000	04680	.06890	.07670
1.200	-.280	-.06220	.02850	-.01200	.00620	-.00030	.47290	.28020	.04750	.06780	.07720
1.200	.860	.01240	-.00290	-.01230	.00550	-.00040	.47000	.27920	.04750	.06690	.07620
1.200	2.000	.08240	-.03240	-.01170	.00430	-.00030	.46730	.27780	.04720	.06700	.07520
1.200	3.180	.15590	-.06310	-.01560	.00690	-.00070	.46420	.27640	.04700	.06650	.07410
1.200	5.490	.30000	-.11690	-.01770	.00660	-.00100	.45980	.27120	.04800	.06720	.07330
1.200	-.280	-.06170	.02930	-.01440	.00790	-.00070	.46940	.28090	.04680	.06540	.07610
	GRADIENT	.06543	-.02745	-.00064	.00027	.00001	-.00132	-.00007	.00005	-.00067	-.00053

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MSFC THT 600 (FA14) O1T1S1A1R1K1F3 (RIL003) (10 OCT 75)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 110/ 0 RN/L = 6.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.740	-.33270	.13560	-.00050	-.00010	-.00060	.29320	.24680	.01240	.01660	.01730
3.479	-3.540	-.23690	.10390	-.00220	.00020	-.00050	.28380	.23800	.01250	.01630	.01680
3.479	-2.470	-.19130	.09000	-.00160	.00110	-.00030	.28250	.23680	.01270	.01630	.01660
3.479	-1.380	-.14790	.07780	-.00260	.00110	-.00040	.27790	.23240	.01280	.01610	.01640
3.479	-.300	-.10350	.06500	-.00220	.00140	-.00050	.27530	.22990	.01280	.01600	.01640
3.479	.780	-.06030	.05160	-.00310	.00150	-.00050	.27280	.22760	.01300	.01570	.01640
3.479	1.880	-.01590	.03710	-.00200	.00050	-.00050	.27000	.22520	.01320	.01540	.01600
3.479	2.970	.03370	.01980	-.00230	-.00020	-.00050	.26650	.22240	.01330	01500	.01560
3.479	5.140	.12710	-.01060	-.00720	.00170	-.00040	.25960	.21710	.01340	.01420	.01480
3.479	-.300	-.10470	.06600	-.00290	.00160	-.00040	.27590	.23070	.01280	.01590	.01630
	GRADIENT	.04114	-.01265	-.00005	-.00007	-.00002	-.00270	-.00246	.00012	-.00020	-.00016

RUN NO. 109/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	-.29930	.12220	.00160	.00120	.00020	.26450	.24490	.00430	.00780	.00730
4.959	-3.340	-.22320	.09960	.00100	.00060	.00010	.25280	.23290	.00460	.00790	.00730
4.959	-2.330	-.19090	.08980	-.00060	.00050	-.00060	.24730	.22710	.00440	.00810	.00760
4.959	-1.300	-.15300	.08100	-.00110	.00080	.00050	.24470	.22340	.00560	.00800	.00750
4.959	-.260	-.11200	.06870	-.00290	.00100	.00010	.23920	.21780	.00580	.00790	.00750
4.959	.760	-.07550	.05770	-.01790	.00590	.00050	.23560	.21430	.00590	.00780	.00750
4.959	1.820	-.03880	.04780	-.00340	.00110	.00030	.23290	.21150	.00600	.00770	.00760
4.959	2 850	.00210	.03510	-.00250	-.00100	.00080	.22950	.20830	.00610	.00760	.00730
4.959	4.900	.08160	.00940	-.01010	.00150	.00020	.22100	.20040	.00630	.00730	.00690
4.959	-.260	-.11490	.06990	-.00310	.00000	.00000	.23880	.21760	00610	.00760	.00740
	GRADIENT	.03710	-.01088	-.00117	.00006	.00007	-.00372	-.00380	.00022	-.00008	-.00005

MSFC TWT 600 (FA14) OITISIAIRIKIF4 (RIL004) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 12/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.600	-5.660	-.44450	.17420	-.00990	.00440	.00020	.27210	.13160	.03590	.05810	.04630
.600	-3.630	-.31890	.12840	-.01100	.00470	.00050	.26960	.13310	.03500	.05700	.04440
.600	-2.460	-.25920	.10730	-.01200	.00560	.00090	.27120	.13340	.03440	.05670	.04660
.600	-1.420	-.20540	.08780	-.01320	.00570	.00030	.26880	.13010	.03420	.05690	.04740
.600	-.330	-.14330	.06720	-.01620	.00840	.00040	.26690	.12790	.03460	.05590	.04830
.600	.730	-.08480	.04760	-.01840	.00920	.00050	.26600	.13340	.03220	.05470	.04560
.600	1.810	-.02300	.02830	-.01880	.00910	.00080	.26270	.12440	.03290	.05610	.04920
.600	2.900	.04110	.00620	-.02000	.00950	.00080	.25970	.12450	.03240	.05600	04670
.600	4.990	.15740	-.03350	-.02340	.01120	.00120	.25280	.11610	.03330	.05570	.04760
.600	-.330	-.14900	.06850	-.01510	.00780	.00040	.26600	.13020	.03300	.05490	.04790
	GRADIENT	.05609	-.01892	-.00150	.00077	00007	-.00205	-.00188	-.00026	-.00015	.00024

RUN NO. 11/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.901	-6.000	-.45020	17280	-.01410	.00670	-.00060	.32990	.14980	.03980	.06440	.07570
.901	-3.750	-.29910	.10830	-.01760	.00830	-.00090	.32570	.14750	.03960	.06350	.07500
.901	-2.640	-.22960	.07510	-.01820	.00870	-.00080	.32650	.15160	.03850	.06210	.07420
.901	-1.560	-.16760	.04810	-.01670	.00780	-.00050	.32000	.14920	.03800	.06330	.06930
.901	-.420	-.09690	.02060	-.01720	.00750	-.00090	.31510	.14930	.03660	.06170	.06720
.901	.700	-.02360	-.00810	-.02070	.00960	-.00080	.31340	.15100	.03610	.06050	.06570
.901	1.840	.05150	-.03650	-.01530	.00660	.00000	.30870	.14700	.03570	.06010	.06570
.901	3.000	.11420	-.05340	-.01610	.00540	-.00040	.30600	.14470	.03570	.06010	.06540
.901	5.230	.24050	-.09470	-.01770	.00580	.00000	.31030	.14310	.03650	.06330	.06720
.901	-.410	-.09870	.02340	-.01940	.00850	-.00100	.31580	.14930	.03650	.06210	.06770
	GRADIENT	.06184	-.02428	.00020	-.00035	.00009	-.00322	-.00051	-.00061	-.00054	-.00156

RUN NO. 10/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.199	-6.150	-.48000	.20430	-.00700	.00030	-.00080	.47150	.27070	.04650	.07390	.08030
1.199	-3.810	-.30310	.12850	-.00980	.00280	-.00070	.47060	.27610	.04650	.06980	.07800
1.199	-2.680	-.22860	.09110	-.01080	.00450	-.00060	.47020	.27800	.04590	.06850	.07770
1.199	-1.550	-.15380	.05450	-.01220	.00380	-.00090	.46750	.27880	.04540	.06650	.07670
1.199	-.360	-.07150	.01950	-.01370	.00490	-.00100	.46580	.27830	.04580	.06600	.07560
1.199	.800	.00880	-.01230	-.01440	.00590	-.00080	.46530	.27780	.04600	.06640	.07500
1.199	1.980	.08440	-.03900	-.01370	.00510	-.00050	.46350	.27510	.04670	.06670	.07480
1.199	3.180	.16130	-.06680	-.01530	.00510	-.00050	.46280	.27370	.04730	.06740	.07420
1.199	5.490	.30870	-.12400	-.01680	.00470	-.00050	.46230	.26890	.04890	.06990	.07440
1.199	-.350	-.06760	.01810	-.01410	.00580	-.00100	.46690	.27900	04560	.06610	.07610
	GRADIENT	.06692	-.02798	-.00075	.00031	.00003	-.00119	-.00044	.00014	-.00033	-.00058

MSFC TWT 600 (FA14) OITISIAIRIKIF4 (RIL004) (10 OCT 75)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 111/ 0 RN/L = 6.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.33530	.13240	-.00160	-.00070	-.00070	.29090	.24410	.01280	.01670	.01720
3.479	-3.560	-.24230	.10330	-.00210	-.00100	-.00080	.28070	.23470	.01270	.01650	.01660
3.479	-2.490	-.19910	.09050	-.00240	-.00080	-.00090	.27750	.23160	.01280	.01640	.01660
3.479	-1.400	-.15300	.07740	-.00520	.00090	-.00090	.27470	.22920	.01280	.01630	.01620
3.479	-.310	-.10840	.06480	-.00680	.00170	-.00100	.27170	.22670	.01290	.01610	.01590
3.479	.760	-.06520	.05170	-.00710	.00170	-.00090	.26820	.22320	.01310	.01590	.01590
3.479	1.840	-.02080	.03660	-.00720	.00170	-.00070	.26670	.22160	.01340	.01560	.01580
3.479	2.950	.02890	.01900	-.00800	.00170	-.00070	.26380	.21950	.01350	.01520	.01540
3.479	5.110	.12450	-.01200	-.00830	.00220	-.00030	.25850	.21590	.01360	.01420	.01470
3.479	-.310	-.10840	.06450	-.00680	.00160	-.00090	.27120	.22630	.01290	.01600	.01590
	GRADIENT	.04145	-.01273	-.00096	.00046	.00002	-.00260	-.00236	.00013	-.00019	-.00018

RUN NO. 112/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.440	-.31220	.12850	.01010	-.00320	-.00080	.26170	.24070	.00560	.00790	.00740
4.959	-3.350	-.23220	.10420	-.00050	.00070	-.00060	.25290	.23140	.00580	.00800	.00760
4.959	-2.330	-.19430	.09330	.00030	-.00150	-.00120	.25070	.22920	.00590	.00810	.00730
4.959	-1.300	-.15900	.08400	-.00140	-.00060	-.00090	.24090	.21950	.00590	.00800	.00730
4.959	-.260	-.11790	.07060	-.00310	-.00070	-.00080	.23850	.21720	.00590	.00790	.00730
4.959	.780	-.07960	.05900	-.00210	-.00190	.00200	.23570	.21450	.00600	.00790	.00720
4.959	1.710	-.17920	.10270	-.00250	-.00150	.00000	.22810	.20670	.00610	00780	.00730
4.959	2.850	.00480	.03120	-.00230	-.00180	.00000	.22800	.20690	.00620	.00760	.00710
4.959	4.920	.08350	.00650	-.00410	-.00160	-.00300	.21970	.19910	.00640	00730	.00680
4.959	-.270	-.12390	.07360	-.00180	-.00180	-.00070	.23910	.21800	.00620	.00770	.00710
	GRADIENT	.03481	-.01051	-.00043	-.00021	-.00010	-.00408	-.00399	.00007	-.00009	-.00007

MSFC TWT 600 (FAI4) O1TIS1AIRIKIF5 (R1L005) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 13/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.600	-5.670	-.45020	.17650	-.01000	.00420	.00020	.13120	.27840	.03660	06020	.05040
.600	-3.530	-.32340	.12950	-.01410	.00580	-.00030	.13470	.27560	.03470	.05740	.04880
.600	-2.470	- 26320	.10740	-.01510	.00620	-.00050	.13450	.27390	.03460	.05660	.04820
.600	-1.420	-.20560	.08620	-.02130	00890	-.00070	.13130	.27390	.03490	.05700	.05070
.600	-.330	-.13960	.06330	-.02240	.00970	-.00080	.13170	.27200	.03540	.05600	.04890
.600	-.330	-.14090	.06380	-.02230	.00960	-.00090	.12980	.27120	.03490	.05680	.04970
.600	.730	-.09070	.04300	-.02450	.01060	-.00050	.13140	.26950	.03380	.05590	.04840
.600	1.800	-.02290	.02500	-.02380	.01060	.00040	.13150	.26770	.03390	.05480	.04760
.600	2.910	.04980	.00110	-.02520	.01110	.00070	.12690	.26390	.03300	.05540	.04860
.600	5.020	.16790	-.03990	-.03260	.01400	.00080	.11740	.25620	.03350	.05690	.04840
	GRADIENT	05749	-.01977	-.00179	.00098	.00017	-.00098	-.00173	-.00026	-.00036	-.00014

RUN NO. 14/ 0 RN/L = 6.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.900	-5.990	- 45090	.17610	-.02190	.00680	-.00280	.15110	.33260	.04000	.06520	.07630
.900	-3.810	-.30020	.09290	-.02470	.00740	-.00220	.16030	.33130	.03780	.06240	.07080
.900	-2.690	-.23370	.06620	-.02240	.00550	-.00220	.15380	.32500	.03810	.06220	.07090
.900	-1.570	-.16020	.03890	-.02730	.00720	-.00250	.15180	.32180	.03800	.06280	.06920
.900	-.430	- 09300	.01330	-.02540	.00640	-.00240	.15200	.31950	.03710	.06210	.06830
.900	-.420	-.08110	.00630	-.02840	.00840	-.00270	.15790	.32440	.03720	.06150	.06780
.900	.680	- 02100	-.01660	-.02740	.00750	-.00270	.15200	.31690	.03670	.06110	.06710
.900	1.820	.05330	-.04290	-.02410	.00550	-.00200	.15190	.31360	.03620	.05990	.06560
.900	2.980	.11600	-.06010	-.02420	.00470	-.00210	.14740	.30880	.03550	.06050	.06540
.900	5.220	.23070	- 08810	-.02620	.00450	-.00190	.13990	.30560	.03540	.06400	.06630
	GRADIENT	.06200	-.02315	-.00006	-.00025	.00002	-.00134	-.00301	-.00038	-.00038	-.00091

RUN NO. 15/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
1.199	-6.170	-.48260	.20130	-.00650	-.00180	-.00100	.27760	.48270	.04850	.07510	.08150
1.199	-3.800	- 30130	12560	-.01000	.00100	-.00120	.28220	.48140	.04770	.07180	.07970
1.199	-2.620	-.21760	.09030	-.01060	.00140	-.00120	.28510	.48070	.04700	.07060	.07800
1.199	-1.480	- 13980	.05820	-.01170	.00220	-.00120	28540	.47990	.04750	.06920	.07780
1.199	-.320	-.06390	.02230	-.01550	.00660	-.00090	.28640	.47840	.04770	.06660	.07770
1.199	-.310	-.06100	.02150	-.01510	.00640	-.00090	28780	.47950	.04750	.06660	.07760
1.199	.820	01240	-.01280	-.01530	.00440	-.00110	.28690	.47740	.04760	.06680	.07610
1 199	1.980	.08220	-.03840	-.01700	.00670	-.00080	28500	.47510	.04790	.06550	.07670
1.199	3.150	.15790	-.07110	-.01740	.00530	-.00110	.28320	47410	.04790	06650	.07650
1.199	5.480	.30670	-.12640	- 02120	.00760	-.00100	.27810	47060	.04850	.06790	.07610
	GRADIENT	.06583	-.02839	-.00119	.00079	.00004	.00013	-.00110	.00008	-.00088	-.00043

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OF POOR QUALITY

MSFC THT 600 (FA14) OITISIAIRIKIFS (RILOO5) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 102/ 0 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
3.479	-5.750	-.33070	.13240	-.00430	.00030	-.00090	.24960	.29660	.01290	.01670	.01740
3.479	-3.560	-.23890	.10380	-.00540	.00040	-.00080	.23900	.28520	.01310	.01650	.01660
3.479	-2.490	-.19400	.09020	-.00960	.00220	-.00080	.23560	.28180	.01310	.01650	.01660
3.479	-1.400	-.14850	.07700	-.00660	.00110	-.00090	.23350	.27930	.01310	.01650	.01620
3.479	-.310	-.10380	.06450	-.00760	.00170	-.00100	.23050	.27560	.01290	.01630	.01590
3.479	-.310	-.10510	.06530	-.00750	.00190	-.00080	.23080	.27600	.01300	.01620	.01600
3.479	.770	-.06050	.05190	-.00790	.00170	-.00070	.22840	.27340	.01320	.01600	.01580
3.479	1.850	-.01600	.03600	-.00800	.00110	-.00070	.22590	.27010	.01320	.01550	.01550
3.479	2.960	.03500	.01820	-.00940	.00170	-.00070	.22390	.26760	.01350	.01510	.01510
3.479	5.110	.12800	-.01190	-.01160	.00330	-.00060	.21940	.26190	.01380	.01420	.01450
	GRADIENT	.04162	-.01284	-.00033	.00008	.00002	-.00229	-.00270	.00005	-.00022	-.00023

RUN NO. 101/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
4.959	-5.430	-.29370	.12300	.00310	.00060	.00050	.24230	.26280	.00550	.00780	.00720
4.959	-3.340	-.22010	.10200	-.00060	.00010	.00020	.23260	.25340	.00560	.00800	.00720
4.959	-2.330	-.18510	.09220	-.00070	00100	.00020	.22910	.25010	.00540	.00820	.00740
4.959	-1.300	-.14990	.08240	-.00100	.00080	-.00040	.22390	.24540	00610	.00810	00730
4.959	- 270	-.11190	.07250	-.00160	-.00080	-.00080	.21840	.23940	.00550	.00810	.00740
4.959	-.270	-.11160	.07250	-.00170	-.00130	-.00080	.22050	.24200	.00650	.00780	.00720
4.959	.760	-.06780	.05910	-.00020	-.00010	.00010	.21540	.23750	.00650	.00800	.00760
4.959	1.790	-.03570	.04930	-.00180	.00050	-.00070	.21320	.23470	.00610	.00790	.00750
4.959	2.850	.01180	.03330	-.01100	.00280	.00000	.21060	.23060	.00550	.00750	.00700
4.959	4.900	.09000	.00860	-.00390	.00110	.00040	.20650	.22540	.00470	.00730	.00690
	GRADIENT	.03783	-.01139	-.00077	.00018	.00002	-.00325	- 00346	-.00007	-.00010	-.00004

MSFC TWT 600 (FA14) 01T1S1A1R1K1F6 (RIL006) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 18/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.601	-5.650	-.44670	.18270	-.01440	.00740	-.00060	.12970	.27510	.03760	.05810	.04970
.601	-3.540	-.33090	.13330	-.01680	.00950	-.00030	.13560	.27570	.03730	.05550	.04730
.601	-2.470	-.27160	.11040	-.02080	.01160	-.00050	.13440	.27540	.03700	.05580	.04820
.601	-1.410	-.20890	.08690	-.02060	.01220	-.00020	.13530	.27340	.03640	.05510	.04660
.601	-.340	-.14690	.06360	-.02560	.01450	-.00060	.13120	.27210	.03640	.05570	.04880
.601	-.340	-.15080	.06530	-.02570	.01410	-.00080	.13390	.27120	.03550	.05580	.04590
.601	.720	-.08950	.04380	-.02570	.01520	-.00020	.13090	.27140	.03600	.05680	.04770
.601	1.790	-.02300	.02160	-.02690	.01540	.00000	.13270	.26730	.03490	.05470	.04500
.601	2.870	.04260	-.00080	-.03030	.01640	-.00010	.12620	.26610	.03650	.05630	.04710
.601	5.000	.15870	-.04090	-.03450	.01890	.00030	.12160	.25710	.03480	.05500	.04570
	GRADIENT	.05777	-.02044	-.00194	.00102	.00008	-.00158	-.00208	-.00025	-.00002	-.00022

RUN NO. 17/ 0 RN/L = 6.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.900	-5 990	-.46110	.18350	-.02150	.00900	-.00280	.14310	.32960	.04360	06390	.07900
.900	-3.780	-.31110	.11480	-.02130	.01110	-.00170	.14820	.33060	04370	.06140	.07730
.900	-2.680	-.24410	.08360	-.02360	.01320	-.00150	14790	.33010	.04310	.06180	.07730
.900	-1 570	-.17540	.05100	-.02710	.01290	-.00190	14820	.32680	.04260	.06020	.07480
.900	-.430	-.10520	.02240	-.02810	.01280	-.00250	14970	.32280	.04130	.05940	.07240
.900	-.430	-.09810	.01730	-.02660	.01390	-.00180	.15360	.32850	.04210	.05990	.07290
.900	.680	-.03540	-.00580	-.02850	.01330	-.00220	.14790	.31810	.04070	.05990	.07060
.900	1.780	.04360	-.04110	-.02950	.01400	-.00240	14850	.31810	.04030	.05940	.06990
.900	2.930	.11410	-.06910	-.02820	.01290	- 00240	.14740	31370	.03860	.06010	.06760
.900	5.180	.22640	-.09340	-.02980	.01290	-.00200	.14060	.31250	.03970	.06330	.06990
	GRADIENT	.06361	-.02741	-.00108	.00024	-.00013	-.00005	-.00263	-.00073	-.00032	-.00154

RUN NO. 16/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
1.198	-6.220	-.50440	.21060	-.01420	.00610	-.00200	.27000	47670	.04990	.07420	.08260
1 198	-3.860	- 31910	13140	-.01700	.00870	- 00220	.27440	.47530	.04970	.07120	.08000
1.198	-2.690	-.23330	.09380	-.01940	.00980	-.00210	.27560	47390	.04960	.07020	.07850
1 198	-1.520	-.15070	.05810	-.02130	.01140	-.00210	.27730	.47360	04960	.06880	.07790
1.198	- 360	- 07450	.02070	- 01890	.01190	-.00100	.27830	.47380	.05010	.06750	.07790
1.198	-.360	-.07290	.02040	-.02110	.01400	-.00140	.27980	47210	.04920	.06570	.07740
1.198	.780	.00230	-.01380	-.02320	.01370	- 00180	.27660	.46990	.04990	.06620	.07720
1.198	1.920	.07800	-.04420	-.02220	.01270	-.00120	.27470	.46680	.04990	.06670	.07550
1.198	3.090	.15080	- 07520	-.02620	.01480	- 00160	.27620	.46620	.04970	.06660	.07370
1.198	5.410	.30030	-.13110	-.02640	01350	-.00150	.27080	.46440	.05080	.07030	.07250
	GRADIENT	.06752	-.02990	-.00108	.00082	.00012	.00009	-.00139	.00003	-.00072	- 00079

MSFC TNT 600 (FA14) O1T1S1A1R1K1F6 (R1L006) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 103/ 0 RN/L = 6.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
3.479	-5.770	-.34230	.13760	-.00540	.00270	-.00040	.24460	.29110	.01250	.01590	.01810
3.479	-3.570	-.24790	.10690	-.00510	.00240	-.00030	.23620	.28270	.01270	.01580	.01800
3.479	-2.510	-.20340	.09330	-.00600	.00280	-.00050	.23300	.27940	.01280	.01580	.01780
3.479	-1.410	-.15620	.07900	-.00690	.00330	-.00030	.23010	.27610	.01290	.01570	.01740
3.479	-.330	-.11160	.06610	-.00790	.00340	-.00040	.22710	.27290	.01320	.01550	.01710
3.479	-.330	-.11430	.06720	-.00720	.00320	-.00040	.22760	.27330	.01320	.01540	.01710
3.479	.770	-.07100	.05560	-.00700	.00270	-.00040	.22360	.26910	.01300	.01570	.01680
3.479	1.850	-.03170	.04360	-.00790	.00290	-.00040	.22100	.26610	.01310	.01530	.01670
3.479	2.930	.01130	.02930	-.00740	.00220	-.00030	.21910	.26380	.01340	.01500	.01630
3.479	5.090	.10950	-.00310	-.00840	.00250	-.00030	.21520	.25850	.01370	.01460	.01500
	GRADIENT	.03968	-.01170	-.00035	-.00003	.00000	-.00269	-.00297	.00009	-.00011	-.00026

RUN NO. 104/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
4.959	-5.420	-.30220	.12320	.00500	00100	.00030	.23960	.26060	.00570	.00760	.00770
4.959	-3.350	-.22590	.10340	.00410	.00010	.00010	.22890	.25020	.00580	.00780	.00770
4.959	-2.320	-.19080	.09300	.00240	.00080	.00010	.22570	.24680	.00560	.00780	.00770
4.959	-1.310	-.15260	.08150	.00170	-.00220	00000	.22090	.24200	.00570	.00780	.00760
4.959	-.270	-.11350	.07100	-.01140	.00480	.00010	.21840	.23930	.00540	.00770	.00780
4.959	-.270	-.11490	.07090	-.00140	-.00060	-.00090	.22000	.23900	.00410	.00750	.00740
4.959	.750	-.07680	.06060	.00010	.00060	-.00220	.21460	.23540	.00540	.00770	.00770
4.959	1.800	-.04430	.05290	-.00190	.00050	-.00050	.21060	.23080	.00500	.00760	.00760
4.959	2.840	-.00620	.04070	-.00210	.00050	.00020	.20800	.22770	.00470	.00740	.00760
4.959	4.890	.07560	.01520	-.00420	-.00030	.00020	.20350	.22170	.00380	.00720	.00720
	GRADIENT	.03626	-.01044	-.00082	-.00001	-.00001	-.00319	-.00352	-.00021	-.00007	-.00005

MSFC TWT 600 (FA14) OITISIAIRIKIF7 (RIL007) (22 NOV 75)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 25/ 0 RN/L = 4.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.595	-5.660	-.46610	.19130	.00050	-.00080	.00110	.11050	.25200	.03720	.05650	.04780
.595	-3.550	-.35400	.14430	-.00090	.00050	.00160	.11260	.24750	.03520	.05510	.04460
.595	-2.490	-.29500	.12270	-.01500	.00930	.00080	.11710	.25000	.03370	.05650	.04270
.595	-1.430	-.23670	.09970	-.01790	.01140	.00080	.10640	.25030	.03480	.05650	.05260
.595	-.370	-.17580	.07650	-.01980	.01270	.00000	.11830	.24980	.03450	.05500	.04200
.595	-.360	-.17000	.07490	-.02310	.01370	-.00010	.11660	.24940	.03460	.05620	.04200
.595	.700	-.11520	.05650	-.02420	.01430	-.00040	.11460	.24780	.03480	.05580	.04260
.595	1.760	-.05680	.03640	-.02630	.01650	.00000	.11480	.24880	.03480	.05580	.04340
.595	2.840	.00810	.01440	-.02660	.01530	.00020	.11320	.24320	.03420	.05510	.04070
.595	4.970	.13000	-.02850	-.02690	.01550	.00110	.10280	.23420	.03350	.05610	.04180
	GRADIENT	.05677	-.02018	-.00262	.00147	-.00008	-.00085	-.00151	-.00010	-.00001	-.00055

RUN NO. 26/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.903	-6.030	-.47350	.18360	-.01870	.00700	-.00160	.13140	.30480	.04270	.05170	.06900
.903	-3.800	-.32460	.11700	-.01390	.00680	-.00070	.13740	.30510	.04050	.06000	.06720
.903	-2.890	-.25290	.08350	-.00840	.00510	.00050	.13210	.30170	.04100	.06200	.06660
.903	-1.590	-.18870	.05370	-.01340	.00690	.00000	.13790	.30350	.03740	.06180	.06640
.903	-.470	-.11520	.02290	-.01930	.00850	-.00090	.13740	.29930	.03690	.06040	.06460
.903	-.460	-.10700	.01730	-.01690	.00820	-.00070	.14400	.30830	.03740	.06180	.06510
.903	.650	-.04600	-.00360	-.02120	.00860	-.00130	.13530	.29640	.03730	.05980	.06400
.903	1.770	.02750	-.03340	-.02020	.00900	-.00050	.13650	.29470	.03600	.05960	.06260
.903	2.900	.10860	-.07050	-.01760	.00760	-.00130	.13720	.29730	.03610	.06120	.06280
.903	5.170	.22170	-.09650	-.02160	.00780	-.00160	.13170	.29310	.03620	.06230	.06290
	GRADIENT	.06408	-.02731	-.00136	.00038	-.00016	.00018	-.00142	-.00074	-.00010	-.00075

RUN NO. 27/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
1.202	-6.240	- 52370	.22150	-.00420	-.00140	-.00140	.25990	.46460	.05220	.07230	.08020
1.202	-3.870	-.33620	.14000	-.00930	.00250	-.00140	.26450	.46230	.05200	.06780	.07800
1.202	-2.710	-.24950	.10190	-.01120	.00350	-.00140	.26650	.46200	.05180	.06650	.07720
1.202	-1.530	-.16740	.06580	-.01260	.00490	-.00130	.26880	.46310	.05220	.06630	.07580
1.202	-.390	-.08960	.02660	-.00780	.00320	-.00020	.26520	.46260	.05300	.06720	.07720
1.202	-.390	-.08620	.02540	-.01010	.00510	-.00060	.26620	.46190	.05240	.06580	.07750
1.202	.750	-.00850	-.00980	-.01400	.00630	-.00080	.26780	.45850	.05200	.06450	.07420
1.202	1.910	.06850	-.04320	-.01410	.00630	-.00070	.26570	.45670	.05290	.06530	.07280
1.202	3.060	.14410	-.07620	-.01610	.00730	-.00110	.26420	.45600	.05330	.06720	.07130
1.202	5.380	.29450	-.13350	-.02030	.00950	-.00150	.25930	.45140	.05430	.06820	.06960
	GRADIENT	.06921	- 03140	-.00085	.00066	.00009	-.00011	-.00105	.00018	-.00019	-.00094

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OF POOR QUALITY

MSFC TWT 600 (FA14) 01T1S1A1R1K1F7 (R1L007) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 106/ 0 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
3.479	-5.770	-.34360	.13780	-.00540	.00230	-.00080	.24440	.29080	.01250	.01570	.01820
3.479	-3.670	-.24800	.10660	-.00630	.00310	-.00090	.23520	.28210	.01290	.01600	.01800
3.478	-2.600	-.20130	.09220	-.00140	.00050	-.00100	.23360	.27970	.01260	.01570	.01780
3.479	-1.410	-.15630	.08050	-.00710	.00230	-.00120	.22980	.27560	.01280	.01560	.01740
3.479	-.330	-.11440	.06820	-.00810	.00250	-.00120	.22740	.27270	.01280	.01550	.01700
3.479	-.330	-.11450	.06730	-.00720	.00290	-.00110	.22800	.27320	.01270	.01550	.01700
3.479	.750	-.07120	.05520	-.00690	.00260	-.00100	.22490	.27030	.01290	.01570	.01680
3.479	1.830	-.02930	.04260	-.00730	.00170	-.00110	.22110	.26580	.01290	.01540	.01640
3.478	2.840	.01770	.02660	-.00810	.00220	-.00090	.21910	.26360	.01320	.01510	.01620
3.479	5.090	.10950	-.00280	-.00910	.00280	-.00070	.21550	.25780	.01320	.01460	.01450
	GRADIENT	.04040	-.01201	-.00056	.00000	.00000	-.00258	-.00292	.00005	-.00011	-.00029

RUN NO. 105/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
4.959	-5.450	-.30510	.12160	.00070	.00150	-.00100	.24090	.26160	.00540	.00760	.00770
4.959	-3.350	-.22880	.10500	-.00170	.00260	-.00060	.23040	.25070	.00480	.00780	.00770
4.959	-2.340	-.19360	.09460	-.00240	-.00040	-.00100	.22440	.24480	.00480	.00780	.00780
4.959	-1.310	-.15600	.08370	-.00070	.00180	-.00060	.22190	.24220	.00450	.00790	.00790
4.959	-.270	-.11750	.07210	-.00250	.00170	-.00070	.21590	.23670	.00520	.00780	.00780
4.959	-.270	-.11750	.07200	-.00240	.00250	-.00030	.21880	.23860	.00460	.00750	.00770
4.959	.770	-.07930	.06150	-.00280	.00180	-.00070	.21240	.23290	.00520	.00760	.00770
4.959	1.810	-.04120	.05160	-.00320	.00210	.00010	.21230	.23220	.00490	.00750	.00750
4.959	2.830	-.00920	.04190	-.00340	.00140	-.00070	.20670	.22650	.00450	.00750	.00780
4.959	4.910	.07600	.01490	-.00830	.00320	.00100	.20240	.22040	.00360	.00720	.00720
	GRADIENT	.03663	-.01069	-.00068	.00016	.00017	-.00334	-.00357	-.00010	-.00008	-.00006

DATE 05 JAN 76 TABULATED SOURCE DATA, MSFC TWT 600 (FA14)

MSFC TWT 600 (FA14) 01T1S1A1R1K1FB (R1L008) (1

REFERENCE DATA PARAMETRIC DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT	BETA =	.000	ORBINC	
LREF =	1290.0000 IN.	YMRP =	.0000 IN. YT	PHI-S =	90.000	Z	
BREF =	1290.0000 IN.	ZMRP =	.0000 IN. ZT				
SCALE =	.0040						

RUN NO. 114/ 0 RN/L = 8.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS
3.479	-5.760	-.34110	.13530	-.00150	.00070	-.00050	.30240	.25600	.01230	.01E
3.479	-3.580	-.24390	.10450	-.00190	.00070	-.00020	.29090	.24520	.01230	.01E
3.479	-2.490	-.19650	.08920	-.00540	.00220	-.00040	.28690	.24140	.01250	.01E
3.479	-1.400	-.15320	.07700	-.00500	.00250	-.00030	.28430	.23910	.01240	.01E
3.479	-.310	-.10850	.06490	-.00600	.00270	-.00040	.28100	.23610	.01250	.01E
3.479	.760	-.06660	.05330	-.00640	.00250	-.00060	.27770	.23290	.01280	.01E
3.479	1.850	-.02330	.03940	-.00660	.00250	-.00050	.27490	.23030	.01300	.01E
3.479	2.940	.02510	.02320	-.00690	.00170	-.00070	.27140	.22740	.01310	.014
3.479	5.110	.11900	-.00840	-.00190	-.00020	-.00060	.26490	.22200	.01320	.013
3.479	-.310	-.10990	.06540	-.00610	.00230	-.00080	.28070	.23580	.01260	.01E
	GRADIENT	.04079	-.01208	-.00062	.00012	- 00007	-.00293	-.00269	.00012	-.000

RUN NO. 113/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS
4.959	-5.430	-.29990	.12280	.00450	.00030	.00060	.27170	.25090	.00560	.007
4.959	-3.340	-.22950	.10200	.00230	-.00020	.00070	.26090	.23980	.00580	.007
4.959	-2.330	-.19140	.09040	.00210	-.00010	00050	.25660	.23520	.00590	.007
4.959	-1.300	-.15630	.08010	.00180	-.00090	.00040	.25210	.23070	.00600	.007
4.959	- 240	-.11250	.06830	.00010	.00000	-.00110	.24710	.22570	.00600	.007
4.959	.780	-.07720	.05900	.00110	-.00040	.00050	.24380	.22280	.00600	.007
4.959	1.810	-.04480	.05200	-.00210	.00080	.00000	.23960	.21880	.00610	.007
4.959	2.850	-.00100	.03920	-.00090	.00050	.00030	.23810	21710	.00620	.007
4.959	4.920	.08080	.01200	-.00150	-.00140	.00000	.22960	.20860	.00640	.007
4.959	-.240	-.11520	.07000	.00000	-.00020	.00070	.24820	.22680	.00630	.007
	GRADIENT	.03723	-.01049	-.00054	- 00003	- 00006	-.00373	-.00368	.00006	-.000

MSFC TWT 600 (FA14) 01T1S1A1R1K1F9 (R1L009) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT, XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 115/ 0 RN/L = 6.35 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.730	-.33310	.13700	.00000	.00000	-.00040	.29970	.25310	.01250	.01640	.01760
3.479	-3.560	-.23720	.10570	-.00090	.00050	-.00030	.28870	.24300	.01250	.01610	.01690
3.479	-2.460	-.18880	.09070	-.00170	.00130	-.00030	.28560	.24010	.01260	.01610	.01670
3.479	-1.380	-.14670	.07830	-.00260	.00190	-.00020	.28250	.23740	.01270	.01590	.01640
3.479	-.290	-.10460	.06670	-.00560	.00260	-.00060	.27960	.23480	.01270	.01560	.01650
3.479	.780	-.06420	.05600	-.00330	.00160	-.00070	.27710	.23230	.01280	.01530	.01650
3.479	1.860	-.02230	.04290	-.00290	.00120	-.00040	.27390	.22910	.01310	.01500	.01650
3.479	2.950	.02870	.02540	-.00370	.00130	-.00060	.26970	.22590	.01310	.01450	.01610
3.479	5.120	.12030	-.00600	-.00260	.00090	-.00040	.26460	.22170	.01320	.01390	.01570
3.479	-.290	-.10480	.06760	-.00300	.00160	-.00060	.28030	.23560	.01270	.01550	.01640
	GRADIENT	.04000	-.01183	-.00038	.00006	-.00005	-.00283	-.00258	.00010	-.00025	-.00009

RUN NO. 116/ 0 RN/L = 5.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.420	-.29720	.12390	.00420	.00000	.00010	.26670	.24540	.00580	.00790	.00760
4.959	-3.360	-.22390	.10250	.00230	.00060	-.00070	.25500	.23330	.00600	.00810	.00740
4.959	-2.330	-.18590	.08980	.00210	-.00030	-.00120	.24970	.22790	.00610	.00800	.00760
4.959	-1.290	-.15060	.08050	.00180	.00020	-.00060	.24710	.22550	.00600	.00800	.00740
4.959	-.260	-.11250	.06890	.00000	.00000	-.00080	.24170	.22010	.00610	.00790	.00760
4.959	.760	-.07750	.05970	.00120	-.00040	-.00110	.23800	.21670	.00610	.00760	.00740
4.959	1.800	-.03920	.04960	-.00190	.00160	-.00070	.23720	.21590	.00620	.00740	.00750
4.959	2.830	-.00110	.03750	-.00220	.00080	-.00110	.23270	.21150	.00630	.00740	.00740
4.959	4.900	.07480	.01330	-.00100	.00030	-.00070	.22630	.20510	.00640	.00730	.00730
4.959	-.250	-.10360	.06580	-.00120	.00140	-.00040	.24310	.22180	.00630	.00750	.00730
	GRADIENT	.03597	-.01052	-.00054	.00006	-.00000	-.00339	-.00331	.00005	-.00011	-.00002

MSFC TWT 600 (FA14) OITISIAIRIKIF10 (RILOIO) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 30/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.600	-5.670	-.46680	.19260	.00160	-.00010	.00160	.25630	.11340	.03380	.05580	.05320
.600	-3.550	-.35400	.14590	-.01200	.00750	.00050	.25440	.11660	.03330	.05550	.04880
.600	-2.480	-.28440	.12090	-.01400	.00880	.00070	.25240	.12010	.03170	.05530	.04510
.600	-1.420	-.22720	.10000	-.01200	.00790	.00120	.25210	.11900	.03170	.05460	.04660
.600	-.350	-.16740	.07880	-.01800	.01150	.00010	.25140	.11740	.03180	.05480	.04720
.600	.710	-.10710	.05780	-.02310	.01460	-.00020	.25110	.11850	.03160	.05360	.04720
.600	1.780	-.05130	.03980	-.02550	.01530	-.00020	24810	.11530	.03150	.05430	.04690
.600	2.850	.01300	.01840	-.02670	.01610	.00030	.24720	.11360	.03090	.05510	.04750
.600	4.970	.13340	-.02250	-.02920	.01700	.00080	.24210	.10740	.03140	.05470	.04840
.600	-.360	-.17620	.08160	-.01910	.01180	.00020	.25210	.12010	.03140	.05370	.04680
	GRADIENT	.05667	-.01952	-.00233	.00129	-.00003	-.00133	-.00120	-.00017	-.00007	.00012

RUN NO. 29/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.903	-6.650	-.47050	.17960	-.01850	.00970	-.00150	.30830	.13840	.03790	.06230	.06950
.903	-3.770	-.31330	.11570	-.01790	01020	-.00140	.30240	13760	.03700	.05990	.06780
.903	-2.660	-.24320	.08320	-.01700	.00910	-.00100	.30250	.13550	.03800	.06090	.06790
.903	-1.560	-.17670	.05350	-.01830	.01060	-.00080	.30350	.14000	.03650	.06100	.06580
.903	-.440	-.10730	.02350	-.02040	.01100	-.00090	.30080	.14020	.03630	.05810	.06600
.903	.670	-.04060	-.00260	-.02040	.01030	-.00140	.29820	.13920	.03550	.05840	.06490
.903	1.790	.03320	-.03490	-.01930	.01020	-.00140	.29720	.13890	.03560	.05810	.06440
.903	2.910	.10510	-.06390	-.02040	.01010	-.00200	.29530	.13620	.03500	.06000	.06400
.903	5.140	.21640	-.09160	-.02550	.01110	-.00230	.29310	.13250	.03550	.06130	.06380
.903	-.440	-.10710	.02330	-.01850	.01010	-.00090	.30270	.14280	.03570	.05900	.06500
	GRADIENT	.06237	-.02666	-.00046	.00005	-.00010	-.00119	.00006	-.00038	-.00025	-.00062

RUN NO. 28/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.196	-6.240	-.52930	.22790	.00000	-.00150	.00010	.47290	.26660	.05030	.07350	.08240
1.196	-3.850	-.33780	.14650	-.00620	.00260	-.00040	.46920	.27070	.04950	.06910	.07970
1.196	-2 690	-.25310	.11000	-.00950	.00490	-.00070	.46960	.27210	.04930	.06890	.07910
1.196	-1.500	-.16980	.07490	-.01110	.00580	-.00090	.47090	.27300	.04960	.06870	.07940
1.196	-.330	-.08960	.04160	-.01230	.00610	-.00100	.47140	.27340	.05050	.06860	.07880
1.196	.830	-.01100	.00920	-.01150	.00630	-.00070	.46870	.27140	.05080	.06790	.07840
1.196	1.980	.06380	-.02340	-.01410	.00710	-.00040	.46430	.27000	.05070	.06710	.07630
1.196	3.120	.13450	-.05440	-.01460	00750	-.00100	.46360	.26730	.05160	06890	.07570
1.196	5.450	.28580	-.11440	-.01960	.01000	-.00100	.46200	.26510	.05200	.07070	.07420
1.196	-.310	-.08240	.03930	-.01380	.00700	-.00120	.47120	.27460	.04990	.06840	07820
	GRADIENT	.06783	-.02871	-.00107	.00060	-.00003	-.00090	-.00049	.00032	-.00015	-.00057

MSFC THT 600 (FA14) O1T1S1A1R1K1F10 (R1L010) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 87/ 1 RN/L = 6.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.740	-.32990	.13310	-.00440	.00130	-.00030	.30270	.25550	.01330	.01550	.01810
3.479	-3.580	-.23310	.10140	-.00520	.00230	-.00050	.29400	.24670	.01360	.01560	.01790
3.479	-2.470	-.18590	.08520	-.00600	.00280	-.00050	.29010	.24340	.01360	.01540	.01760
3.479	-1.380	-.13890	.07080	-.00550	.00290	-.00050	.28670	.24070	.01340	.01520	.01740
3.479	-.290	-.09550	.05860	-.00640	.00360	-.00020	.28360	.23770	.01350	.01500	.01730
3.479	.780	-.05620	.04770	-.00610	.00310	-.00030	.27910	.23370	.01350	.01490	.01690
3.479	1.850	-.01570	.03520	-.00570	.00260	-.00020	.27620	.23060	.01360	.01520	.01660
3.479	2.940	.03140	.01950	-.00600	.00220	-.00030	.27260	.22750	.01360	.01500	.01640
3.479	5.110	.12180	-.00990	-.00630	.00210	.00000	.26690	.22260	.01370	.01470	.01580
3.479	-.300	-.10050	.06070	-.00660	.00320	.00120	.28380	.23780	.01360	.01500	.01720
	GRADIENT	.04005	-.01214	-.00008	-.00002	.00005	-.00328	-.00297	.00000	-.00008	-.00023

RUN NO. 88/ 1 RN/L = 5.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.410	-.28510	.11790	.00280	.00010	.00060	.26980	.24750	.00630	.00790	.00790
4.959	-3.370	-.21780	.09890	.00230	-.00020	.00050	.25730	.23520	.00640	.00780	.00780
4.959	-2.320	-.17700	.08500	.00220	.00030	.00050	.25260	.23030	.00640	.00780	.00790
4.959	-1.310	-.14460	.07470	-.00080	.00070	.00000	.24640	.22410	.00640	.00780	.00780
4.959	-.250	-.09780	.06010	.00040	.00090	.00050	.24330	.22120	.00650	.00770	.00780
4.959	.770	-.06560	.05200	.00000	.00020	.00000	.23750	.21560	.00640	.00760	.00760
4.959	1.800	-.03330	.04390	-.00160	.00150	.00010	.23550	.21360	.00650	.00750	.00770
4.959	2.840	.01060	.03490	-.00370	.00230	-.00040	.23110	.20920	.00660	.00750	.00770
4.959	4.880	.08670	.00680	-.00240	.00080	.00010	.22640	.20480	.00660	.00740	.00760
4.959	-.250	-.10090	.06190	.00180	.00010	.00050	.24300	.22090	.00660	.00760	.00780
	GRADIENT	.03661	-.01063	-.00069	.00019	-.00008	-.00380	-.00373	.00003	-.00006	-.00003

MSFC THT 800 (FA14) 01T1S1A1R1K1F11 (R1L011) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1280.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 37/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.601	-5.710	-.45190	.15770	.00310	.00000	.00080	.26870	.12660	.03570	.05640	.04890
.601	-3.560	-.32410	.11710	-.00660	.00430	.00060	.26920	.12660	.03620	.05690	.04940
.601	-2.510	-.27090	.09120	-.01380	.01000	.00000	.26700	.13110	.03500	.05480	.04610
.601	-1.410	-.20520	.08340	-.01170	.00510	.00020	.26580	.12900	.03470	.05470	.04730
.601	-.330	-.14850	.06820	-.01020	.00440	.00040	.26600	.12840	.03460	.05500	.04790
.601	.780	-.08310	.05960	-.01220	.00680	.00120	.26290	.12500	.03380	.05360	.05030
.601	1.840	-.02370	.04240	-.01370	.00730	.00110	.26040	.11990	.03440	.05630	.05080
.601	2.840	.04490	.01950	-.01700	.00870	.00080	.25930	.11980	.03320	.05560	.05070
.601	5.080	.16480	-.01890	-.01770	.00810	.00180	.25030	.11330	.03220	.05630	.04830
.601	-.300	-.13910	.07650	-.00880	.00600	.00160	.28720	.12720	.03380	.05560	.05040
	GRADIENT	.05678	-.01363	-.00103	.00031	.00013	-.00151	-.00156	-.00037	-.00013	.00053

RUN NO. 38/ 0 RN/L = 6.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.905	-6.120	-.46730	.15510	-.00980	.00790	-.00030	.32160	.14340	.04110	.06180	.07520
.905	-3.790	-.30090	.09870	-.01020	.00800	-.00030	.32050	.14950	.03960	.05980	.07140
.905	-2.650	-.23170	.07640	-.01640	.01070	-.00110	.31620	.14850	.03880	.05890	.06990
.905	-1.500	-.15850	.05360	-.01570	.00980	-.00120	.31290	.14710	.03820	.05920	.06820
.905	-.350	-.08820	.03260	-.01630	.00880	-.00120	.30980	.14510	.03800	.05900	.06760
.905	.790	-.01440	.00730	-.01650	.00870	-.00120	.30870	.14540	.03760	.05800	.06750
.905	1.930	.05470	-.01470	-.01700	.00790	-.00170	.30460	.14420	.03700	.05680	.06640
.905	3.070	.11840	-.03260	-.01770	.00720	-.00230	.30130	.14260	.03680	.05600	.06570
.905	5.360	.24060	-.06140	-.02030	.00720	-.00190	.30400	.13910	.03770	.05960	.06740
.905	-.350	-.09080	.03460	-.01940	.01030	-.00190	.30860	.14440	.03800	.05840	.06770
	GRADIENT	.06166	-.01943	-.00076	-.00028	-.00022	-.00265	-.00097	-.00039	-.00052	-.00077

RUN NO. 39/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.200	-6.330	-.51880	.19810	.00120	-.00130	.00010	.47270	.26890	.04930	.07200	.08220
1.200	-3.870	-.31710	12280	-.00180	.00160	-.00040	.47260	.27580	.04810	.06870	.07970
1.200	-2.660	-.22850	.09080	-.00530	.00310	-.00040	.47110	.27600	.04780	.06760	.07950
1.200	-1.460	-.14370	06220	-.00800	.00400	-.00060	.46820	.27630	.04690	.06660	.07830
1.200	-.260	-.06050	.03270	-.00950	.00460	-.00090	.46750	.27400	.04800	.06650	.07890
1.200	.940	.01920	.00790	-.01000	.00430	-.00080	.46640	.27470	.04750	.06640	.07760
1.200	2.130	.09380	-.01380	-.01010	.00410	-.00070	.46450	.27170	.04890	.06620	.07760
1.200	3 350	.16890	-.03540	-.01170	.00420	-.00080	.46450	.27110	.04850	.06720	.07740
1.200	5.740	.32580	-.08420	-.01700	.00550	-.00120	.46520	.27130	.04890	.06890	.07580
1.200	-.240	-.05330	.03090	-.01100	.00550	-.00110	.46730	.27660	.04730	.06510	.07810
	GRADIENT	.06735	-.02194	-.00123	.00030	-.00006	-.00117	-.00072	.00013	-.00022	-.00034

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MSFC TWT 600 (FA14) OITISIAIRIKIFII (RILOII) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 82/ 1 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.34250	.13780	-.00030	.00030	-.00030	.30590	.25890	.01290	.01710	.01690
3.479	-3.550	-.24270	.10690	-.00080	.00060	-.00040	.29570	.24930	.01290	.01660	.01670
3.479	-2.470	-.19540	.09270	-.00170	.00130	-.00030	.29240	.24620	.01300	.01630	.01670
3.479	-1.380	-.15080	.08150	-.00280	.00180	-.00040	.28820	.24260	.01300	.01590	.01650
3.479	-.290	-.10740	.07080	-.00310	.00240	-.00040	.28430	.23950	.01290	.01550	.01620
3.479	.790	-.06390	.05910	-.00610	.00360	-.00040	.27940	.23520	.01300	.01530	.01580
3.479	1.880	-.01780	.04390	-.00350	.00000	.00270	.27720	.23290	.01320	.01520	.01580
3.479	2.980	.03160	.02520	-.00650	.00240	-.00040	.27350	.22960	.01340	.01480	.01560
3.479	5.140	.12720	-.00570	-.00740	.00300	-.00010	.26730	.22490	.01360	.01410	.01450
3.479	-.280	-.10610	.07080	-.00320	.00240	-.00060	.28340	.23870	.01290	.01550	.01620
	GRADIENT	.04153	-.01199	-.00079	.00015	.00020	-.00347	-.00306	.00006	-.00027	-.00019

RUN NO. 81/ 1 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	-.30050	.11860	.00640	.00010	-.00040	.26910	.24800	.00580	.00790	.00720
4.959	-3.360	-.22100	.09630	.00280	.00100	-.00030	.25810	.23680	.00600	.00790	.00720
4.959	-2.330	-.18280	.08520	.00090	.00010	-.00060	.24970	.22820	.00600	.00800	.00730
4.959	-1.300	-.14750	.07590	.00050	.00000	.00000	.24970	.22840	.00610	.00790	.00720
4.959	-.250	-.10520	.06580	-.01590	.00710	-.00020	.24560	.22420	.00610	.00780	.00730
4.959	.770	-.07450	.05960	.00090	-.00160	-.00110	.24110	.21960	.00620	.00780	.00740
4.959	1.800	-.04060	.05140	.01540	-.00600	-.00070	.24050	.21920	.00620	.00760	.00730
4.959	2.860	.00460	.03740	-.00090	.00050	-.00050	.23700	.21530	.00640	.00770	.00740
4.959	4.910	.08660	.01080	-.00010	-.00180	.00030	.22880	.20750	.00640	.00750	.00720
4.959	-.260	-.10940	.06870	-.00140	.00090	-.00060	.24610	.22480	.00620	.00760	.00730
	GRADIENT	.03668	-.00987	.00031	-.00047	.00003	-.00321	-.00322	.00005	-.00005	.00001

MSFC THT 600 (FA14) O1TIS1AIRIKIF12 (R1L012) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 43/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.598	-5.680	-.47200	.19260	.00130	-.00270	.00130	.24950	.10960	.03280	.05410	.05290
.598	-3.550	-.35210	.14530	.00050	-.00250	.00130	.24980	.11070	.03390	.05330	.05170
.598	-2.480	-.28970	.12240	-.00970	.00140	.00090	.24910	.11110	.03250	.05480	.05050
.598	-1.420	-.23720	.10340	-.00970	.00170	.00080	.24850	.11020	.03320	.05470	.05030
.598	-.360	-.17650	.08070	-.01280	.00280	.00050	.24680	.11200	.03270	.05340	.04850
.598	.700	-.11900	.06100	-.01400	.00360	.00010	.24630	.11080	.03200	.05370	.04970
.598	1.770	-.06090	04210	-.01410	.00430	.00080	.24560	.10740	.03260	.05470	.05080
.598	2.860	.00160	.02050	-.01530	.00430	.00070	.24210	.10220	.03230	05540	.05210
.598	4.980	.12240	-.02010	-.01890	.00530	.00060	.23590	.09600	.03220	.05550	.05200
.598	-.360	-.17680	.08130	-.01180	.00290	.00090	.24880	.11130	.03210	.05390	.05140
	GRADIENT	.05535	-.01926	-.00180	.00077	-.00006	-.00154	-.00172	-.00015	.00020	.00014

RUN NO. 44/ 0 RN/L = 6.31 GRADIENT INTERVAL = -5.00/ 5 00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.905	-6.030	-.47330	.18470	-.01270	.00490	-.00070	.30240	.13440	.03790	.05980	.07020
.905	-3.760	-.31860	.11840	-.01350	.00630	-.00060	.30070	.13710	.03730	.05790	.06830
.905	-2.670	-.24970	.08680	-.01170	.00610	-.00010	.29950	.13700	.03670	.05820	.06740
.905	-1.570	-.17960	.05240	-.01340	.00680	-.00010	.29980	.13970	.03620	.05710	.06660
.905	-.450	-.10970	.02320	- 01570	.00720	-.00040	.29810	.13710	.03610	.05850	.06630
.905	.670	-.03700	-.00600	-.01790	.00820	-.00080	.29610	.13870	.03540	.05660	.06520
.905	1.800	.04370	-.04060	-.01510	.00670	-.00080	29210	.13440	03560	.05700	.06500
.905	2.940	.10870	-.06390	-.02050	.00660	-.00210	.29190	.13280	.03560	.05860	.06470
.905	5.190	.21640	- 08520	- 02020	.00650	-.00160	.28900	.12880	.03520	.06030	.06460
.905	-.440	-.10540	.02210	-.01530	.00650	-.00060	.29690	.13710	.03630	.05750	.06590
	GRADIENT	.06430	-.02749	- 00103	.00011	-.00021	-.00144	-.00062	-.00027	-.00002	-.00054

RUN NO. 45/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5 00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.200	-6.230	-.52490	.22690	-.00130	-.00320	.00040	.46170	.26200	.04830	.07080	.08040
1.200	-3.850	-.34150	.14840	-.00670	00000	-.00020	.46080	.26450	.04860	.06770	.07980
1.200	-2.680	-.25660	.11180	-.00810	.00120	-.00040	.45970	.26670	.04820	.06620	.07850
1.200	-1.520	-.17650	.07650	-.01000	.00230	-.00080	.46040	.26670	.04920	.06600	.07840
1.200	-.380	-.09550	.03650	-.00760	.00210	.00000	.46010	.26560	.04960	.06600	.07870
1.200	.770	-.01780	.00230	-.01240	.00510	-.00060	.45830	.26460	.05020	.06540	.07800
1.200	1.920	.05950	-.03140	-.01290	.00550	-.00070	.45590	.26250	.05100	.06560	.07680
1.200	3.080	.13550	-.06270	-.01620	.00680	-.00100	.45600	.26110	.05190	.06750	.07550
1.200	5.430	.28380	-.11780	-.01960	.00790	-.00120	.45260	.25680	.05230	.06920	.07430
1.200	-.370	-.09240	.03540	-.00910	.00270	-.00020	.46050	.26570	.04980	.06600	.07880
	GRADIENT	.06883	-.03079	-.00125	.00099	-.00009	-.00075	-.00064	.00051	-.00007	-.00052

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MSFC TWT 600 (FA14) 01T1S1A1R1K1F12 (R1L012) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 75/ 1 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.33540	.13130	-.00580	.00100	-.00130	.29150	.24400	.01360	.01580	.01800
3.479	-3.580	-.24370	.10280	-.00660	.00080	-.00120	.28310	.23550	.01380	.01590	.01770
3.479	-2.500	-.19790	.08790	-.00610	.00080	-.00120	.28040	.23310	.01380	.01590	.01740
3.479	-1.400	-.15460	.07730	-.00660	.00080	-.00120	.27690	.22960	.01380	.01590	.01740
3.479	-.320	-.11000	.06440	-.00690	.00090	-.00120	.27340	.22660	.01360	.01570	.01730
3.479	.760	-.06550	.05170	-.00650	.00080	-.00080	.27040	.22350	.01380	.01580	.01720
3.479	1.850	-.01830	.03610	-.00620	.00000	-.00060	.26730	.22120	.01380	.01540	.01670
3.479	2.960	.02750	.02110	-.00770	.00040	-.00070	.26410	.21810	.01390	.01520	.01670
3.479	5.110	.12060	-.00820	-.00800	.00110	-.00040	.25780	.21390	.01380	.01470	.01530
3.479	-.310	-.10860	.06430	-.00760	.00130	-.00100	.27410	.22730	.01370	.01570	.01720
	GRADIENT	.04140	-.01228	-.00011	-.00009	.00010	-.00294	-.00269	00001	-.00011	-.00015

RUN NO. 76/ 1 RN/L = 4.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	-.30890	.12700	.00450	.00060	00020	.26230	.24030	.00620	.00780	.00780
4.959	-3.370	-.23560	.10440	.00100	.00090	00010	.25190	.22960	.00640	.00790	.00780
4.959	-2.330	-.19590	.09170	.00220	-.00040	-.00060	.24620	.22400	.00650	.00790	.00760
4.959	-1.300	-.15280	.07860	-.00110	.00040	00360	.24400	.22140	.00660	.00800	00780
4.959	-.270	-.11820	.06900	-.00290	-.00030	-.00110	.23810	.21590	.00660	.00790	.00760
4.959	.760	-.07700	.05670	-.00310	.00000	.00000	.23670	.21450	.00660	.00780	.00770
4.959	1.790	-.04210	.04800	-.00190	.00040	.00010	.23310	.21080	.00680	.00760	.00770
4.959	2.850	.00480	.03230	-.00370	-.00010	.00000	.22890	.20680	.00680	.00750	.00760
4.959	4.920	.08380	.00580	-.00260	-.00150	.00050	.22010	.19840	.00680	.00730	.00740
4.959	-.270	-.12100	07010	-.00290	.00000	.00020	.24010	.21780	.00680	.00770	.00770
	GRADIENT	.03841	-.01165	-.00056	-.00017	-.00003	-.00366	-.00360	.00005	-.00008	-.00003

MSFC TNT 600 (FA14) O1T1S1A1R1K1F13 (R1L013) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 90/ 1 RN/L = 6.37 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.34010	.13540	-.00910	.00110	-.00190	.29450	.24760	.01270	.01710	.01700
3.479	-3.580	-.24570	.10640	-.00900	.00050	-.00160	.28460	.23810	.01280	.01700	.01660
3.479	-2.510	-.21300	.09890	-.00930	.00120	-.00170	.28130	.23490	.01280	.01700	.01650
3.479	-1.400	-.15760	.08160	-.01280	.00270	-.00170	.27720	.23120	.01280	.01690	.01620
3.479	-.310	-.11470	.06980	-.01110	.00240	-.00180	.27360	.22780	.01300	.01650	.01620
3.479	.760	-.07030	.05640	-.01010	.00200	-.00140	.27050	.22490	.01320	.01620	.01610
3.479	1.850	-.02310	.03950	-.01080	.00230	-.00100	.26770	.22290	.01340	.01580	.01540
3.479	2.940	.02800	.02090	-.01280	.00280	-.00090	.26420	.22010	.01360	.01540	.01500
3.479	5.110	.12080	-.00930	-.01200	.00180	-.00090	.25790	.21520	.01380	.01480	.01400
3.479	-.310	-.11330	.06970	-.01180	.00260	-.00170	.27360	.22790	.01300	01640	.01610
	GRADIENT	.04232	-.01316	-.00039	.00028	.00012	-.00312	-.00277	.00013	-.00026	-.00023

RUN NO. 89/ 1 RN/L = 5.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	-.30840	.12850	.00090	-.00130	-.00190	.26680	.24500	.00590	.00810	.00760
4.959	-3.370	-.23530	.10610	-.00090	-.00090	-.00180	.25310	.23140	.00590	.00830	.00740
4.959	-2.350	-.19460	.09230	.00190	-.00190	-.00120	.24950	.22730	.00610	.00840	.00760
4.959	-1.300	-.15630	.08170	-.00130	-.00110	-.00120	.24470	.22220	.00630	.00850	.00770
4.959	-.260	-.11800	.07070	-.00330	-.00170	-.00180	.23990	.21800	.00610	.00830	.00730
4.959	.760	-.08290	.06030	-.00350	-.00170	-.00150	.23560	.21380	.00600	00820	.00740
4.959	1.790	-.04140	.04830	-.00960	.00120	-.00110	.23220	.21050	00620	.00800	.00730
4.959	2.830	.00180	.03240	-.00370	-.00090	-.00090	.22970	.20770	.00670	.00780	.00730
4.959	4 890	.08100	.00700	-.00420	-.00190	-.00010	.21970	.19880	.00650	.00750	.00680
4.959	-.260	-.11750	.07380	-.00940	.00060	-.00160	.23830	.21680	.00610	.00790	.00730
	GRADIENT	.03809	-.01183	-.00069	.00001	.00016	-.00397	-.00387	.00007	-.00011	-.00008

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MSFC THT 600 (FA14) O1T1S1A1R1K1F14 (R1L014) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 54/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.597	-5.660	-.44720	.17930	-.00890	.00610	.00130	.25970	.12110	.03550	.05690	.04600
.597	-3.530	-.32320	.13060	-.00770	.00530	.00160	.25870	.11530	.03470	.05510	.05350
.597	-2.460	-.26280	.10850	-.00780	.00470	.00150	.25710	.11770	.03390	.05320	.05220
.597	-1.400	-.21100	.09090	-.00900	.00530	.00190	.25740	.12020	.03470	.05480	.04760
.597	-.340	-.15090	.06880	-.00890	.00560	.00150	.25600	.11700	.03440	.05280	.05180
.597	.720	-.09730	.05020	-.01120	.00630	.00170	.25590	.11890	.03540	.05170	.04980
.597	1.790	-.03660	.02960	-.01240	.00690	.00180	.25460	.11400	.03440	.05210	.05400
.597	2.860	.03030	.00750	-.01480	.00740	.00170	.25080	.11200	.03420	.05190	.05240
.597	4.980	.15220	-.03340	-.01830	.00810	.00180	.24410	.10780	.03230	.05250	.05120
.597	-.330	-.14910	.06850	-.00900	.00520	.00170	.25630	.11590	.03480	.05200	.05340
	GRADIENT	.05560	-.01918	-.00129	.00041	.00002	-.00154	-.00106	-.00018	-.00032	-.00001

RUN NO. 53/ 0 RN/L = 6.35 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.900	-6.010	-.46240	.17800	-.01160	.00680	.00000	.30820	.13600	.03920	.06400	.06880
.900	-3.740	-.30840	.11690	-.01300	.00790	.00000	.30410	.13950	.03750	.06140	.06550
.900	-2.630	-.24180	.08980	-.01270	.00770	.00000	.30570	.14030	.03770	.06140	.06610
.900	-1.530	-.17300	.05720	-.01220	.00760	.00020	.30500	.13990	.03730	.06160	.06610
.900	-.410	-.10460	.02900	-.01500	.00840	-.00020	.30230	.13870	.03730	.06080	.06540
.900	.700	-.03320	-.00030	-.01310	.00720	-.00010	.29890	.13570	.03770	.06110	.06410
.900	1.830	.03780	-.02760	-.01240	.00660	-.00030	.29810	.13930	.03640	.06070	.06160
.900	2.950	.09690	-.05070	-.01550	.00720	-.00110	.29490	.13780	.03570	.06070	.06060
.900	5.190	.22310	-.09020	-.01910	.00820	-.00140	.29770	.13820	.03650	.06250	.06040
.900	-.410	-.09360	.02160	-.01620	.00960	-.00050	.30940	.14470	.03740	.06070	.06660
	GRADIENT	.06133	-.02545	-.00025	-.00015	-.00013	-.00157	-.00036	-.00024	-.00013	-.00082

RUN NO. 52/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.201	-6.180	-.48330	.20000	-.00010	-.00160	.00080	.47120	.27040	.04900	.07130	.08030
1.201	-3.800	-.30240	.12560	-.00480	.00030	.00020	.46920	.27380	.04720	.07030	.07780
1.201	-2.630	-.22250	.09360	-.00650	.00160	.00020	.46860	.27460	.04720	.06900	.07770
1.201	-1.450	-.14250	.06180	-.00820	.00300	.00000	.46710	.27700	.04620	.06770	.07610
1.201	-.280	-.06310	.03050	-.01040	.00430	-.00050	.46630	.27680	.04700	.06690	.07550
1.201	.880	.01140	.00160	-.01120	.00490	-.00060	.46410	.27690	.04720	.06520	.07470
1.201	2.030	.08010	-.02460	-.01110	.00500	-.00040	.46140	.27460	.04720	.06540	.07400
1.201	3.170	.14980	-.05600	-.01400	.00870	-.00100	.45950	.27480	.04720	.06390	.07340
1.201	5.490	.29550	-.11320	-.01420	.00420	-.00090	.45770	.26860	.04880	.06770	.07240
1.201	-.270	-.08420	.03480	-.01090	.00400	-.00020	.46180	.27880	.04540	.06320	.07430
	GRADIENT	.06499	-.02584	-.00122	.00088	-.00017	-.00143	.00009	.00003	-.00089	-.00068

MSFC TWT 600 (FA14) 01T1S1A1R1K1F14 (R1L014) (10 OCT 75)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 976.0000 IN, XT
LREF = 1290.0000 IN. YMRP = .0000 IN, YT
BREF = 1290.0000 IN. ZMRP = .0000 IN, ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 91/ 1 RN/L = 8.37 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.730	-.33270	.13840	.00040	-.00110	-.00030	.29780	.25070	.01240	.01680	.01770
3.479	-3.560	-.23840	.10570	-.00150	.00050	-.00050	.28850	.24170	.01270	.01650	.01740
3.479	-2.460	-.18870	.09140	-.00050	.00040	-.00040	.28380	.23740	.01270	.01630	.01720
3.479	-1.380	-.14670	.07910	-.00130	.00150	-.00030	.28140	.23540	.01280	.01600	.01700
3.479	-.290	-.10360	.06680	-.00100	.00110	-.00020	.27890	.23350	.01280	.01570	.01670
3.479	.780	-.06430	.05600	-.00140	.00080	-.00030	.27460	.22950	.01290	.01540	.01670
3.479	1.860	-.02250	.04300	.00030	.00010	-.00030	.27210	.22710	.01290	.01510	.01680
3.479	2.950	.02580	.02580	-.00040	-.00010	-.00050	.26880	.22450	.01300	.01460	.01650
3.479	5.120	.12150	-.00660	-.00330	.00100	-.00050	.26270	.21960	.01330	.01400	.01560
3.479	-.290	-.10230	.06650	-.00110	.00090	-.00020	.27830	.23300	.01280	.01570	.01660
	GRADIENT	.03981	-.01186	.00016	-.00010	.00001	-.00294	-.00258	.00005	-.00029	-.00013

RUN NO. 92/ 1 RN/L = 5.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.420	-.30010	.12620	.00410	-.00020	.00010	.26730	.24570	00580	.00800	.00760
4.959	-3.360	-.22370	.10130	.00230	.00000	.00040	.26540	.23360	.00600	.00810	.00760
4.959	-2.330	-.18870	.09040	.00350	-.00120	.00010	.25000	.22820	.00600	.00820	.00760
4.959	-1.300	-.15370	.08070	.00470	-.00120	.00010	.24660	.22470	.00590	.00810	.00770
4.959	-.260	-.11530	.06950	.00150	-.00050	.00040	.24300	.22110	.00600	.00800	.00770
4.959	.760	-.08020	05970	.00120	-.00070	.00000	.24010	.21850	.00610	.00780	.00760
4.959	1.800	-.04200	.05080	-.00060	.00020	.00000	.23620	.21450	.00620	.00760	.00770
4.959	2.850	-.00130	.03820	.00050	-.00050	-.00060	.23530	.21370	.00630	.00760	.00750
4.959	4.900	.07490	.01440	-.00140	-.00120	.00000	.22680	.20550	.00650	.00760	.00720
4.959	-.250	-.11250	.07220	.00110	-.00060	.00000	.24380	.22190	.00640	.00790	.00760
	GRADIENT	.03617	-.01037	-.00060	-.00002	-.00007	-.00327	-.00321	.00006	-.00008	-.00004

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MSFC THT 600 (FA14) O1T1S1A1R1K1F17 (R1L015) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN, XT
LREF = 1290.0000 IN. YMRP = .0000 IN, YT
BREF = 1290.0000 IN. ZMRP = .0000 IN, ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = -3.000
PHI-S = 90.000 Z = .140

RUN NO. 61/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.596	-5.710	-.56670	.26000	-.00980	.00130	-.00070	.12280	.27970	.03630	.05930	.06130
.596	-3.580	-.43710	.20400	-.01000	.00140	-.00110	.12570	.27490	.03480	.05760	.05680
.596	-2.510	-.37000	.17850	-.01300	.00300	-.00150	.12300	.27280	.03540	.05850	.05590
.596	-1.460	-.31550	.15640	-.01590	.00470	-.00090	.12480	.27140	.03490	.05780	.05390
.596	-.390	-.24970	.13280	-.01700	.00470	-.00090	.12550	.27000	.03440	.05680	.05330
.596	.670	-.19480	.11430	-.01720	.00510	-.00070	.12750	.27150	.03380	.05690	.05330
.596	1.730	-.14050	.09640	-.01940	.00650	-.00040	.12140	.26940	.03540	.05780	.05480
.596	2.820	-.08380	.07820	-.02180	.00680	-.00090	.12080	.26600	.03410	.05720	.05390
	GRADIENT	.05500	-.01958	-.00166	.00079	.00010	-.00051	-.00112	-.00011	-.00012	-.00039

RUN NO. 62/ 0 RN/L = 6.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.904	-6.070	-.58480	.27100	-.02080	.00750	-.00290	.15220	.34050	.04310	.06500	.08020
.904	-3.820	-.42780	.20310	-.01980	.00850	-.00230	.15230	.33520	.04200	.06430	.07660
.904	-2.710	-.35750	.16970	-.02450	.01130	-.00250	.15340	.33340	.04100	.06420	.07480
.904	-1.610	-.28820	.13610	-.02490	.01230	-.00240	.15090	.33220	.04150	.06450	.07530
.904	-.490	-.21240	.10200	-.02740	.01300	-.00250	.15170	.32810	.03950	.06500	.07190
.904	-.490	-.21360	.10320	-.02440	.01190	-.00210	.15270	.32910	.03970	.06430	.07240
.904	.620	-.14460	.07510	-.02650	.01310	-.00210	.14680	.32470	.04100	.06360	.07330
.904	1.740	-.07560	.04820	-.02770	.01310	-.00220	.14410	.31910	.04000	.06400	.07100
.904	2.870	-.01280	.02310	-.02600	.01150	-.00200	.13930	.31440	.03960	.06550	.07000
.904	5.130	.13190	-.02640	-.02590	.01060	-.00240	.13260	.30610	.03880	.06570	.06900
	GRADIENT	.06257	-.02705	-.00085	.00043	.00006	-.00198	-.00316	-.00031	.00007	-.00094

RUN NO. 63/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
1.199	-6.280	-.62620	.30680	-.00610	-.00020	-.00080	.27240	.47710	.04830	.07340	.08300
1.199	-3.890	-.44890	.23250	-.01060	.00260	-.00130	.27170	.46920	.04730	.06980	.08040
1.199	-2.730	-.36390	.19610	-.01070	.00250	-.00110	.26970	.46880	.04790	.07060	.08060
1.199	-1.560	-.27760	.15760	-.01120	.00260	-.00120	.26910	.46620	.04780	.07020	.07910
1.199	-.420	-.19840	.11970	-.01040	.00280	-.00070	.26670	.46520	.04840	.06950	.08050
1.199	-.410	-.19420	.11830	-.01140	.00340	-.00100	.26680	.46460	.04850	.06880	.08050
1.199	.730	-.11790	.08420	-.01430	.00500	-.00110	.26460	.46080	.04930	.06870	.07820
1.199	1.880	-.04060	.04880	-.01430	.00460	-.00080	.25940	.45750	.05030	.06960	.07820
1.199	3.060	.03710	.01620	-.01650	.00510	-.00120	.25920	.45680	.05040	.07130	.07590
1.199	5.380	.18700	-.04140	-.01920	.00650	-.00170	.25290	.45140	.05060	.07210	.07580
	GRADIENT	.06997	-.03142	-.00087	.00044	.00003	-.00193	-.00201	.00048	.00003	-.00059

C. 6

MSFC TWT 600 (FA14) OITISIAIRIKIF17 (RIL015) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = -3.000
PHI-S = 90.000 Z = .140

RUN NO. 107/ 0 RN/L = 6.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
3.479	-5.770	-.38260	.17300	-.00680	.00450	-.00160	.24640	.29430	.01260	.01610	.01920
3.479	-2.510	-.23740	.12270	-.00660	.00360	-.00100	.23360	.28100	.01270	.01590	.01880
3.479	-1.420	-.19010	.10770	-.00750	.00360	-.00120	.22920	.27600	.01270	.01560	.01850
3.479	-.330	-.14570	.09410	-.00720	.00310	-.00080	.22620	.27320	.01300	.01580	.01820
3.479	-.330	-.14690	.09490	-.00720	.00320	-.00090	.22690	.27340	.01270	.01570	.01810
3.479	.740	-.10500	.08210	-.00810	.00340	-.00090	.22350	.27010	.01290	.01560	.01810
3.479	1.820	-.06300	.06870	-.00890	.00380	-.00100	.22250	.26890	.01290	.01540	.01810
3.479	2.920	-.01860	.05340	-.00830	.00370	-.00100	.22030	.26630	.01310	.01530	.01760
3.479	5.070	.07680	.02130	-.00870	.00330	-.00110	.21550	.25980	.01320	.01480	.01630
	GRADIENT	.03994	-.01254	-.00037	.00004	.00001	-.00236	-.00257	.00007	-.00010	-.00019

RUN NO. 108/ 0 RN/L = 4.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
4.959	-5.440	-.34260	.16130	.00000	.00190	-.00120	.24260	.26470	.00670	.00750	.00790
4.959	-3.350	-.25520	.13010	.00130	.00100	-.00110	.22880	.25090	.00620	.00780	.00810
4.959	-2.340	-.21390	.11510	-.00320	.00150	-.00140	.22290	.24520	.00640	.00790	.00800
4.959	-1.300	-.17610	.10360	-.00190	.00150	-.00100	.21810	.24030	.00610	.00790	.00820
4.959	-.270	-.13780	.09360	-.00400	.00030	-.00120	.21230	.23440	.00630	.00780	.00800
4.959	-.270	-.13490	.09090	-.00260	-.00150	-.00120	.21400	.23640	.00640	.00780	.00820
4.959	.750	-.09690	.07860	-.00370	.00190	-.00110	.20910	.23100	.00600	.00770	.00820
4.959	1.780	-.06190	.06880	-.00390	.00220	-.00110	.20670	.22840	.00590	.00760	.00820
4.959	2.830	-.02650	.05730	-.00420	.00140	-.00090	.20380	.22590	.00640	.00760	.00810
4.959	4.890	.06140	.02750	-.01030	.00410	-.00090	.19790	.21890	.00570	.00740	.00790
	GRADIENT	.03776	-.01205	-.00103	.00032	.00004	-.00367	-.00379	-.00005	-.00006	-.00001

ORIGINAL PAGE IS
OF POOR QUALITY

MSFC TWT 600 (FA14) OITISIAIRIKI (RIL016) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 19/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.593	-5.650	-.44570	.17990	-.00920	.00540	.00150	.27200	.12670	.03570	.05880	.05060
.593	-3.520	-.32220	.12970	-.00980	.00620	.00150	.27110	.13010	.03520	.05800	.04760
.593	-2.460	-.26060	.10790	-.01400	.00820	.00120	.26980	.13340	.03450	.05600	.04580
.593	-1.420	-.20850	.08910	-.01720	.00970	.00070	.26750	.13010	.03440	.05550	.04730
.593	-.330	-.14310	.06620	-.01720	.01000	.00080	.26690	.13030	.03380	.05700	.04560
.593	.730	-.08870	.04730	-.01840	.01030	.00070	.26490	.13120	.03370	.05410	.04590
.593	1.800	-.02970	.02890	-.02180	.01200	.00090	.26250	.12220	.03420	.05700	.04890
.593	2.890	.03360	.00810	-.02210	.01220	.00080	.25940	.12440	.03290	.05480	.04720
.593	5.010	.15840	-.03340	-.02870	.01540	.00100	.25260	.11560	.03320	.05640	.04720
.593	-.330	-.14970	.06840	-.01820	.01100	.00090	.26790	.13080	.03440	.05550	.04710
	GRADIENT	.05515	-.01888	-.00179	.00088	-.00009	-.00175	-.00129	-.00027	-.00030	.00012

RUN NO. 20/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.903	-6.010	-.45740	.17690	- 01580	.00890	-.00020	.31840	.14480	.03860	.06390	.07100
.903	-3.740	-.30060	.11270	-.01750	.01060	-.00050	.31580	.14490	.03830	.06320	.06920
.903	-2.630	-.23310	.08240	-.01770	.01080	-.00030	.31690	.14380	.03870	.06410	.07020
.903	-1.540	-.16000	.04760	-.02000	.01210	-.00060	.31470	.14180	.03870	.06350	.07060
.903	-.400	-.08920	.01790	- 02040	.01160	-.00080	.31430	.14850	.03740	.06200	.06630
.903	.700	-.02130	-.00990	-.02320	.01260	-.00100	.31060	.14370	.03730	.05130	.06810
.903	1.830	.05230	-.04070	-.02070	.01020	-.00060	.30730	.14400	.03680	.06150	.06490
.903	2.960	.11700	-.06600	-.02180	.01060	-.00120	.30510	.14400	.03600	.06130	.06370
.903	5.210	.22930	-.09150	- 02590	.01190	-.00140	.30420	.13630	.03750	.06500	.06530
.903	-.410	-.09040	.01810	-.02160	.01170	-.00090	.31480	.14810	.03750	06180	.06730
	GRADIENT	.06277	-.02686	-.00071	-.00002	-.00010	-.00177	-.00001	-.00039	-.00042	-.00095

RUN NO. 21/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5 00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.198	-6.190	-.48540	.20100	-.00340	.00010	-.00040	.47900	.27510	.04850	.07340	.08170
1.198	-3.800	-.29980	.12460	-.00950	.00390	-.00060	.47650	.28000	.04690	.07070	.07870
1.198	-2.620	-.21530	08990	-.01050	.00490	-.00070	.47590	.28120	.04690	.07000	.07770
1.198	-1.470	-.13570	.05770	-.01180	.00550	-.00090	.47500	.28330	.04650	.06900	.07610
1.198	-.260	-.05140	.02480	-.01220	.00530	-.00090	.47320	.28170	.04730	.06830	.07580
1.198	.890	.02120	-.00370	-.01250	.00610	-.00060	.47270	.28100	.04790	.06750	.07620
1.198	2.030	.08940	-.03230	-.01460	.00710	- 00070	.46820	.28180	.04620	.06560	.07450
1.198	3.200	.16100	-.06360	-.01490	.00630	-.00070	.46860	.27880	.04770	.06690	.07490
1.198	5.510	.31090	-.12130	-.01520	.00600	-.00080	.46660	.27460	.04850	.06910	.07430
1.198	-.260	-.05200	.02580	-.01350	.00690	-.00100	.47340	.28370	.04680	.06680	.07580
	GRADIENT	.06580	-.02665	-.00077	.00037	-.00000	-.00127	-.00014	.00007	-.00066	-.00054

MSFC TWT 600 (FA14) OITISIAIRIKI (RILOI6) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 70/ 1 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.730	-.33250	.13710	-.00020	-.00130	.00000	.30040	.25360	.01240	.01660	.01770
3.479	-3.550	-.23430	.10500	-.00170	.00010	-.00030	.29020	.24390	.01270	.01630	.01710
3.479	-2.460	-.18990	.09140	-.00180	.00070	-.00020	.28680	.24080	.01280	.01620	.01690
3.479	-1.380	-.14530	.07830	-.00140	.00120	.00070	.28420	.23890	.01280	.01590	.01650
3.479	-.290	-.10210	.06570	-.00240	.00110	-.00010	.28070	.23550	.01290	.01560	.01660
3.479	.780	-.06160	.05470	-.00070	.00050	.00020	.27730	.23220	.01290	.01540	.01660
3.479	1.860	-.02100	.04200	-.00110	-.00030	.00000	.27380	.22900	.01300	.01500	.01660
3.479	2.950	.02730	.02500	-.00170	.00040	.00000	.27060	.22650	.01300	.01460	.01640
3.479	5.120	.12050	-.00710	-.00390	.00120	.00000	.26540	.22230	.01330	.01390	.01570
3.479	-.290	-.10480	.06700	-.00110	.00080	.00000	.28080	.23590	.01280	.01540	.01650
	GRADIENT	.03981	-.01196	.00007	-.00006	.00003	-.00303	-.00272	.00005	-.00026	-.00009

RUN NO. 69/ 1 RN/L = 5.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.420	-.29530	.12210	.00420	-.00110	.00030	.26890	.24760	.00570	.00800	.00740
4.959	-3.380	-.21770	.09720	.00240	-.00020	.00110	.25690	.23510	.00600	.00810	.00760
4.959	-2.330	-.18260	.08690	.00200	-.00090	.00040	.25140	.23000	.00580	.00800	.00750
4.959	-1.300	-.15010	.07810	-.00100	.00050	.00080	.24690	.22550	.00590	.00800	.00730
4.959	-.260	-.10950	.06660	.00150	-.00080	.00050	.24240	.22040	.00610	.00790	.00770
4.959	.770	-.06840	.05490	-.00020	-.00010	.00050	.24060	.21880	.00620	.00770	.00780
4.959	1.800	-.02740	.04320	-.00210	-.00050	-.00060	.23650	.21500	.00610	.00760	.00760
4.959	2.840	.00470	.03520	-.00100	-.00150	-.00010	.23360	.21250	.00610	.00750	.00730
4.959	4.900	.08090	.01090	-.00150	-.00170	.00080	.22730	.20630	.00640	.00750	.00710
4.959	-.270	-.13000	.07490	.00120	-.00200	.00030	.24060	.21880	.00640	.00760	.00770
	GRADIENT	03673	-.01052	- 00050	-.00016	-.00008	-.00344	-.00336	.00005	-.00008	-.00004

MSFC THT 600 (FAI4) OITIS2AIRIKI (RILO17) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 24/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.601	-5.660	-.44130	.17860	-.00690	.00460	.00150	.27070	.12660	.03510	.05820	.05060
.601	-3.550	-.33320	.13260	-.00850	.00580	.00170	.27140	.13060	.03520	.05790	.04750
.601	-2.470	-.26900	.10960	-.01060	.00700	.00170	.26970	.12840	.03530	.05800	.04790
.601	-1.420	-.20800	.08770	-.01570	.00900	.00100	.26680	.13170	.03350	.05640	.04500
.601	-.340	-.14880	.06720	-.01580	.00940	.00080	.26590	.13220	.03300	.05630	.04430
.601	.730	-.08730	.04680	-.01600	.00960	.00130	.26450	.12900	.03360	.05520	.04660
.601	1.800	-.03090	.02990	-.02140	.01230	.00070	.26120	.12850	.03230	.05450	.04570
.601	2.890	.03460	.00780	-.02170	.01200	.00120	.25860	.12120	.03430	.05630	.04670
.601	4.980	.15110	-.03020	-.02430	.01270	.00130	.25080	.11730	.03260	.05540	.04530
.601	-.340	-.14850	.08730	-.01570	.00970	.00080	.26550	.12860	.03360	.05610	.04710
	GRADIENT	.05647	-.01887	-.00186	.00083	-.00005	-.00228	-.00152	-.00026	-.00032	-.00018

RUN NO. 23/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.902	-6.020	-.44880	.16630	-.01380	.00940	-.00010	.31380	.13610	.03980	.06500	.07280
.902	-3.770	-.29880	.10750	-.01720	.01050	-.00030	.31050	.13850	.03900	.06220	.07070
.902	-2.630	-.22300	.07250	-.02070	.01260	-.00040	.30990	.13740	.03890	.06300	.07050
.902	-1.550	-.15400	.04100	-.02210	.01310	-.00050	.30930	.13780	.03860	.06210	.07070
.902	-.410	-.08480	.01200	-.02180	.01230	-.00080	.30830	.13690	.03890	.06220	.07030
.902	.700	-.01300	-.01700	-.02280	.01270	-.00040	.30610	.13650	.03810	.06150	.06980
.902	1.820	.05260	-.04230	-.02120	.01110	.00000	.30280	.13820	.03730	.06090	.06620
.902	2.980	.12160	-.06670	-.01960	.00920	-.00040	.30010	.13270	.03780	.06170	.06760
.902	5.200	.23130	-.09000	-.02200	.00930	-.00060	.30010	.13540	.03580	.06420	.06450
.902	-.410	-.08550	.01300	-.01950	.01110	-.00050	.30660	.14230	.03690	.06110	.06610
	GRADIENT	.06221	-.02579	-.00028	-.00023	.00002	-.00155	-.00056	-.00023	-.00020	-.00060

RUN NO. 22/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.197	-6.210	-.48710	.19750	-.00490	.00160	-.00020	.47190	.25870	.04840	.07380	.08090
1.197	-3.810	-.30200	.12230	-.00910	.00430	-.00070	.46730	.27210	.04680	.07050	.07780
1.197	-2.830	-.21520	.08770	-.01070	.00550	-.00080	.46550	.27110	.04680	.06930	.07810
1.197	-1.470	-.13660	.05660	-.01340	.00740	-.00100	.46390	.27170	.04660	.06830	.07720
1.197	-.260	-.05220	.02470	-.01440	.00780	-.00090	.46280	.27080	.04710	.06800	.07680
1.197	.900	.02240	-.00360	-.01430	.00800	-.00070	.46200	.27160	.04760	.06680	.07580
1.197	2.060	.09260	-.02910	-.01540	.00770	-.00070	.45830	.26970	.04700	.06670	.07470
1.197	3.240	.16600	-.05830	-.01720	.00840	-.00110	.45800	.26840	.04750	.06630	.07560
1.197	5.550	.31130	-.11420	-.01690	.00630	-.00070	.45870	.26510	.04910	.06950	.07480
1.197	-.260	-.05270	.02700	-.01540	.00850	-.00110	.46150	.27340	.04630	.06590	.07560
	GRADIENT	.06622	-.02540	-.00105	.00053	-.00002	-.00134	-.00043	.00011	-.00059	-.00045

MSFC TWT 600 (FA14) OITIS2AIRIK) (RIL017) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 71/ 1 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.730	-.33140	.13660	.00000	.00000	-.00020	.30390	.25700	.01240	.01660	.01770
3.479	-3.550	-.23590	.10640	-.00040	.00010	-.00040	.29310	.24700	.01280	.01610	.01700
3.479	-2.460	-.19030	.09230	.00200	-.00030	-.00030	.28960	.24390	.01290	.01580	.01680
3.479	-1.370	-.14680	.07980	-.00080	.00110	-.00010	.28640	.24110	.01290	.01560	.01660
3.479	-.290	-.10610	.06930	-.00120	.00100	-.00010	.28350	.23900	.01270	.01520	.01640
3.479	.780	-.06550	.05760	-.00170	-.00030	-.00050	.27930	.23450	.01280	.01510	.01660
3.479	1.860	-.02230	.04390	-.00180	.00060	.00000	.27710	.23260	.01290	.01490	.01650
3.479	2.950	.02470	.02670	-.00240	.00070	-.00030	.27420	.23030	.01300	.01450	.01620
3.479	5.110	.11800	-.00630	-.00660	.00170	-.00030	.26770	.22460	.01320	.01400	.01580
3.479	-.290	-.10860	.07010	-.00060	.00040	.00050	.28390	.23930	.01280	.01520	.01650
	GRADIENT	.03959	-.01182	-.00048	.00007	.00002	-.00293	-.00262	.00002	-.00023	-.00010

RUN NO. 72/ 1 RN/L = 5.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.440	-.29120	.11920	.00160	.00130	-.00130	.27140	.25010	.00580	.00780	.00760
4.959	-3.360	-.22090	.09850	.00240	-.00020	-.00040	.25910	.23770	.00590	.00780	.00760
4.959	-2.330	-.18570	.08810	.00240	.00080	.00020	.25510	.23340	.00600	.00790	.00770
4.959	-1.290	-.14470	.07590	.00200	.00030	.00010	.25160	.23000	.00600	.00800	.00750
4.959	-.260	-.11270	.06780	.00170	.00000	-.00080	.24660	.22460	.00620	.00790	.00770
4.959	.760	-.07720	.06010	-.00020	.00060	.00000	.24360	.22170	.00620	.00780	.00780
4.959	1.800	-.04470	.05240	-.00350	.00190	.00000	.23970	.21810	.00620	.00750	.00770
4.959	2.830	-.00120	.03870	.00050	-.00050	.00000	.23810	.21680	.00630	.00750	.00730
4.959	4.900	.07480	.01390	-.00130	-.00090	-.00070	.22950	.20840	.00640	.00740	.00720
4.959	-.260	-.11240	.06770	-.00130	.00030	-.00070	.24730	.22570	.00640	.00770	.00730
	GRADIENT	.03552	-.00984	-.00053	-.00008	-.00003	-.00352	-.00347	.00006	-.00007	-.00004

MSFC TWT 600 (FA14) 01T1S2A1R1K1F12_ (R1L018) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 48/ 0 RN/L = 5.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.600	-5.670	-.46430	.18830	.00860	-.00600	.00210	.24830	.10560	.03280	.05570	.05400
.600	-3.550	-.34390	.13970	.00280	-.00330	.00170	.24790	.10760	.03310	.05390	.05310
.600	-2.480	-.28580	.11920	.00070	-.00230	.00140	.24790	.10660	.03290	.05620	.05210
.600	-1.420	-.22980	.09890	-.00860	.00090	.00110	.24680	.11080	.03230	.05410	.04950
.600	-.360	-.16940	.07660	-.01160	.00230	.00060	.24470	.10890	.03200	.05310	.05050
.600	.710	-.10560	.05590	-.00760	.00170	.00130	.24450	.11060	.03080	.05430	.04880
.600	1.770	-.05200	.03850	-.01090	.00300	.00090	.24240	.10400	.03100	.05440	.05280
.600	2.850	.01420	.01710	-.01220	.00360	.00130	.23920	.10280	.03040	.05390	.05190
.600	4.990	.13070	-.02260	-.01660	.00550	.00120	.23310	.09580	.03020	.05420	.05280
.600	-.360	-.17260	.07760	-.00950	.00200	.00120	.24650	.11080	.03210	.05320	.05020
	GRADIENT	.05588	-.01902	-.00204	.00097	-.00004	-.00172	-.00136	-.00038	-.00006	.00009

RUN NO. 47/ 0 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.903	-6.040	-.46450	.17400	-.01150	.00440	-.00050	.29360	.12610	.03790	.05980	.06970
.903	-3.810	-.31530	.10640	-.01080	.00560	.00010	.29470	.13050	.03750	.05780	.06880
.903	-2.700	-.24810	.07680	-.01710	.00800	-.00040	.29310	.12880	.03670	05930	06820
.903	-1.580	-.17500	.04540	-.01980	.00860	-.00080	.29530	.13230	.03630	.05890	.06760
.903	- 450	-.10590	.01960	-.02040	.00860	-.00100	.29320	.13050	03630	.05890	.06720
.903	.660	-.03460	-.01100	-.01890	.00840	-.00060	.29240	.13260	.03560	.05810	.06590
.903	1.790	.04070	-.04030	-.02000	.00800	-.00110	.28730	.12950	.03520	.05770	.06480
.903	2.940	10620	-.06370	-.01910	.00660	-.00160	.28590	.12700	.03510	.05880	.06480
.903	5.190	.21870	-.08610	-.02030	.00630	-.00140	.28660	.12430	.03540	.06170	.06510
.903	-.450	- 10600	.01980	-.01980	.00840	-.00090	.29260	.13130	.03630	.05780	.06700
	GRADIENT	.06299	-.02545	-.00094	.00009	-.00020	-.00130	-.00028	-.00035	-.00003	-.00065

RUN NO. 46/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5 00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.198	-6.260	- 52670	.22230	-.00050	-.00420	.00060	.45500	.25480	.04850	.07110	.08040
1.198	-3.880	-.34210	.14400	-.00730	.00010	.00000	.45170	.25560	.04870	.06740	.07980
1.198	-2.700	-.25510	.10670	-.00720	.00060	-.00020	.45160	.25630	.04870	.06680	.07960
1.198	-1.560	-.17880	.06900	-.00580	.00100	.00020	.45070	.25650	.04890	.06530	.07990
1.198	-.390	-.09460	.03330	-.00720	.00260	-.00010	.44990	.25560	.04970	.06570	.07870
1.198	.760	-.01800	.00000	-.01170	.00470	-.00050	44780	.25250	.05060	.06580	.07870
1.198	1.940	.06160	-.02960	-.01260	.00550	-.00070	.44540	.25300	.05090	.06440	.07690
1.198	3.110	.13660	-.05890	-.01600	.00640	-.00090	.44410	.25070	.05180	.06610	.07540
1.198	5.460	.28550	-.11200	-.02050	.00900	-.00150	.44460	.24880	.05270	.06840	.07460
1.198	-.380	-.09070	.03230	-.00780	.00240	-.00020	.45020	.25490	.05020	.06570	.07930
	GRADIENT	.06848	-.02917	-.00132	.00099	-.00014	-.00117	-.00078	.00047	-.00025	-.00061

MSFC TWT 600 (FA14) 01T1S2A1R1K1F12 (R1L018) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 74/ 1 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.770	-.34060	.13320	-.00680	.00100	-.00130	.29380	.24610	.01350	.01560	.01840
3.479	-3.590	-.24600	.10350	-.00600	.00040	-.00130	.28410	.23690	.01360	.01580	.01770
3.479	-2.500	-.20190	.09100	-.00690	.00100	-.00110	.28260	.23530	.01380	.01580	.01750
3.479	-1.410	-.15840	.07930	-.00660	.00080	-.00200	.27810	.23120	.01370	.01580	.01720
3.479	-.320	-.11370	.06760	-.00760	.00170	-.00100	.27600	.22940	.01360	.01560	.01720
3.479	.770	-.06540	.05370	-.00670	.00060	-.00110	.27210	.22600	.01370	.01530	.01700
3.479	1.850	-.02690	.04200	.00200	-.00340	-.00080	.26910	.22350	.01390	.01520	.01640
3.479	2.960	.02360	.02440	-.00780	.00060	-.00090	.26610	.22100	.01380	.01490	.01620
3.479	5.110	.11800	-.00590	-.00890	.00070	-.00060	.25990	.21650	.01380	.01460	.01490
3.479	-.320	-.11360	.06780	-.00830	.00170	-.00110	.27790	.23160	.01350	.01550	.01700
	GRADIENT	.04100	-.01182	.00040	-.00027	.00009	-.00285	-.00251	.00003	-.00014	-.00023

RUN NO. 73/ 1 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	-.30790	.12610	-.00190	-.00130	-.00140	.26250	.24060	.00620	.00780	.00780
4.959	-3.390	-.22960	.09590	-.00030	-.00150	-.00100	.25250	.23020	.00640	00790	.00790
4.959	-2.340	-.19440	.08990	-.00230	-.00090	-.00150	.24690	.22450	.00650	.00800	.00780
4.959	-1.320	-.15910	.08120	-.00280	-.00130	-.00110	.24310	.22060	.00660	.00800	.00780
4.959	-.270	-.11800	.06890	-.00300	-.00080	-.00010	.24000	.21740	.00670	.00790	.00780
4.959	.750	-.08860	.06250	-.00350	-.00150	.00030	.23600	.21380	.00660	.00780	.00760
4.959	1.790	-.04770	.05040	-.00370	-.00120	.00000	.23260	.21020	.00680	.00770	.00770
4.959	2.820	-.01270	.03950	-.00180	-.00240	.00060	.22850	.20660	.00670	.00750	.00770
4.959	4.870	.07810	.00700	-.00400	-.00120	.00050	.22020	.19860	.00660	.00740	.00740
4.959	-.270	-.12130	.07080	-.00010	-.00170	-.00070	.24160	.21920	.00680	00780	.00770
	GRADIENT	.03667	-.01054	-.00027	-.00005	.00026	-.00379	-.00370	.00003	-.00007	-.00005

MSFC TNT 600 (FA14) 01T1S1A1R1K1PS11 (RIL019) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 118/ 0 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.720	-.33150	.13870	-.00150	.00000	-.00060	.30110	.25470	.01230	.01640	.01750
3.479	-3.550	-.23700	.10790	-.00430	.00190	-.00060	.29140	.24560	.01260	.01610	.01700
3.479	-2.460	-.18850	.09210	-.00510	.00230	-.00070	.28710	.24190	.01250	.01590	.01660
3.479	-1.370	-.14650	.07980	-.00540	.00260	-.00060	.28450	.23990	.01250	.01580	.01630
3.479	-.280	-.10210	.06720	-.00300	.00210	-.00050	.28190	.23750	.01250	.01540	.01640
3.479	.790	-.06020	.05590	-.00340	.00200	-.00060	.27820	.23400	.01270	.01500	.01640
3.479	1.870	-.01830	.04260	-.00300	.00150	-.00040	.27530	.23120	.01280	.01480	.01650
3.479	2.970	.02750	.02670	-.00380	.00150	-.00070	.27190	.22880	.01280	.01420	.01600
3.479	5.120	.12070	-.00520	-.00660	.00240	-.00080	.26590	.22360	.01300	.01380	.01540
3.479	-.280	-.10210	.06750	-.00310	.00180	-.00070	.28180	.23760	.01250	.01530	.01620
	GRADIENT	.04017	-.01206	.00025	-.00011	.00001	-.00291	-.00256	.00005	-.00029	-.00010

RUN NO. 117/ 0 RN/L = 5.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	-.30840	.12960	-.00170	.00180	-.00090	.26660	.24570	.00550	00790	.00730
4.959	-3.330	-.22070	.10230	-.00060	.00160	-.00060	.25570	.23440	.00580	.00790	.00740
4.959	-2.320	-.18830	.09250	-.00230	.00190	-.00050	.24960	.22840	.00570	.00800	.00730
4.959	-1.370	-.15030	.08040	-.00110	.00090	-.00060	.24560	.22450	.00570	.00790	.00730
4.959	-.260	-.11230	.06990	-.00130	.00120	-.00070	.24160	.22040	.00580	.00780	.00760
4.959	.760	-.07710	.06060	-.00310	.00190	-.00100	.23870	21760	.00590	.00770	.00740
4.959	1.800	-.04120	.05100	-.01210	.00610	-.00090	.23610	.21520	.00590	.00750	.00730
4.959	2.860	.00190	.03790	-.00360	.00230	-.00100	.23430	.21320	.00610	.00750	.00740
4.959	4.890	.06980	.01590	-.00990	.00370	-.00080	.22680	.20600	.00620	.00750	.00690
4.959	-.260	-.11510	.07170	-.00150	.00090	.00020	.24170	.22070	.00600	.00760	.00720
	GRADIENT	03562	-.01041	-.00116	.00036	-.00006	-.00327	-.00322	.00006	-.00007	-.00004

MSFC TWT 600 (FA14) O1T1S1A1R1K1PS1OPS11 (R1L020) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 119/ 0 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.33820	.13890	.00050	-.00090	-.00060	.30340	.25710	.01230	.01620	.01760
3.479	-3.570	-.24460	.10900	-.00490	.00230	-.00060	.29380	.24800	.01250	.01610	.01720
3.479	-2.480	-.19510	.09230	-.00230	00160	-.00070	.28970	.24460	.01240	.01590	.01680
3.479	-1.390	-.15060	.08000	-.00190	.00170	-.00060	.28660	.24200	.01240	.01560	.01650
3.479	-.300	-.10870	.06810	-.00290	.00180	-.00060	.28270	.23840	.01250	.01530	.01640
3.479	.780	-.06540	.05570	-.00320	.00200	-.00060	.27990	.23580	.01270	.01500	.01630
3.479	1.860	-.02360	.04370	-.00170	.00070	-.00040	.27670	.23290	.01280	.01470	.01620
3.479	2.950	.02480	.02700	-.00310	.00110	-.00060	.27420	.23090	.01290	.01430	.01590
3.479	5.120	.12200	-.00800	-.00700	.00300	-.00050	.26930	.22680	.01300	.01400	.01540
3.479	-.300	-.10990	.06890	-.00290	.00180	-.00070	.28290	.23860	.01250	.01530	.01630
	GRADIENT	.04066	-.01209	.00016	-.00017	.00002	-.00301	-.00266	.00008	-.00027	-.00017

RUN NO. 120/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	-.30030	.12360	.00270	-.00050	-.00060	.26950	.24820	.00580	.00800	.00740
4.959	-3.360	-.22380	.10080	.00090	.00060	.00030	.26020	.23870	.00590	.00800	.00750
4.959	-2.320	-.18290	.08750	.00220	.00000	.00020	.25610	.23470	.00570	.00800	.00750
4.959	-1.300	-.15330	.08000	-.00100	.00100	.00010	.25230	23050	.00590	.00800	.00770
4.959	-.260	-.11530	.06950	-.00140	.00040	-.00050	.24560	.22420	.00590	.00790	.00750
4.959	.760	-.07730	.05910	-.00040	-.00110	-.00060	.24180	.22080	.00590	.00750	.00740
4.959	1.790	-.04470	.05090	-.00350	.00110	.00000	.23920	.21830	.00600	.00750	.00730
4.959	2.830	-.00080	.03700	-.00380	00010	-.00090	.23550	.21480	.00590	.00750	.00730
4.959	4 900	.08110	00810	-.00260	-.00100	.00020	.22640	.20580	.00610	.00740	.00690
4 959	-.260	-.11510	.06940	-.00270	.00170	00010	24770	.22670	.00600	.00750	.00740
	GRADIENT	.03647	-.01076	-.00060	-.00015	-.00006	-.00407	-.00394	.00003	-.00009	-.00007

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MSFC TWT 600 (FAI4) O1T1S1A1R1K1PS12PS13 (R1L021) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 122/ 0 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.740	-.32770	.13730	-.00030	-.00060	-.00020	.30890	.26280	.01260	.01580	.01760
3.479	-3.530	-.22910	.10490	-.00520	.00140	-.00040	.29990	.25470	.01280	.01560	.01670
3.479	-2.460	-.18320	.09040	-.00580	.00280	-.00020	.29770	.25290	.01270	.01550	.01640
3.479	-1.360	-.13750	.07710	-.00280	.00170	-.00030	.29470	.25020	.01270	.01540	.01630
3.479	-.270	-.09680	.06680	-.00330	.00170	-.00020	.29080	.24690	.01270	.01480	.01620
3.479	.810	-.05220	.05490	-.00360	.00190	-.00020	.28710	.24360	.01280	.01420	.01640
3.479	1.880	-.01300	.04190	-.00320	.00120	-.00040	.28390	.24040	.01290	.01420	.01630
3.479	3.000	.03790	.02440	-.00260	.00100	-.00020	.28120	.23840	.01300	.01380	.01590
3.479	5.150	.13130	-.00720	-.00690	.00230	-.00040	.27500	.23370	.01300	.01320	.01500
3.479	-.270	-.09810	.06760	-.00330	.00180	-.00020	.29040	.24680	.01270	.01470	.01610
	GRADIENT	.04033	-.01186	.00040	-.00014	.00001	-.00300	-.00265	.00004	-.00030	-.00008

RUN NO. 121/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.420	-.29350	.12300	.00000	.00220	.00050	.27650	.25500	.00570	.00810	.00750
4.959	-3.350	-.21760	.09990	.00080	.00090	.00060	.26600	.24410	.00600	.00810	.00770
4.959	-2.330	-.18800	.09120	-.00220	.00240	.00120	.26190	.24040	.00590	.00790	.00750
4.959	-1.280	-.14120	.07840	-.00280	.00090	.00060	.25690	.23560	.00600	.00790	.00730
4.959	-.250	-.10630	.06970	-.00170	.00070	.00030	.25220	.23090	.00610	.00770	.00730
4.959	.780	-.07100	.06210	-.00210	.00080	.00070	.24820	.22700	.00610	.00750	.00740
4.959	1.810	-.03590	.05110	-.00230	.00090	.00060	.24750	.22630	.00620	.00740	.00750
4.959	2.840	.01090	.03370	-.00370	.00170	.00060	.24670	.22550	.00640	.00720	.00740
4.959	4.910	.09010	.01160	-.00310	.00060	.00260	.24080	.22010	.00640	.00710	.00720
4.959	-.250	-.10310	.06900	-.00310	.00180	.00090	.25330	.23250	.00600	.00730	.00730
	GRADIENT	.03729	-.01064	-.00033	-.00007	.00014	-.00298	-.00287	.00006	-.00012	-.00003

MSFC TWT 600 (FA14) O1T1S1A1R1K1F10F13 (RIL022) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 31/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.599	-5.680	-.47960	.19900	-.01070	.00490	-.00020	.25100	.11030	.03340	.05700	.05010
.599	-3.550	-.35590	.14960	-.01130	.00620	.00030	.25220	.11480	.03260	.05620	.04840
.599	-2.490	-.30060	.12900	-.01230	.00680	.00030	.25240	.11550	.03320	.05600	.04750
.599	-1.420	-.23790	.10590	-.01630	.00930	.00050	.25180	.11790	.03240	.05440	.04690
.599	-.360	-.18520	.08680	-.01950	.01060	-.00010	.25210	.11620	.03280	.05580	.04810
.599	.700	-.12010	.06470	-.01850	.01090	-.00020	.25030	.11650	.03210	.05570	.04590
.599	1.770	-.05980	.04410	-.02280	.01260	.00000	.24850	.11340	.03180	.05480	.04830
.599	2.850	.00840	.02140	-.02510	.01350	.00000	.24580	.10940	.03260	.05550	.04620
.599	4.970	.12750	-.01960	-.03060	.01580	.00070	.23990	.10320	.03160	.05650	.04840
.599	-.360	-.17830	.08440	-.02060	.01100	.00000	.25160	.11600	.03240	.05520	.04780
	GRADIENT	.05705	-.01988	-.00223	.00113	.00001	-.00142	-.00137	-.00013	.00003	.00006

RUN NO. 32/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.904	-6 040	-.48330	.19090	-.01240	.00390	-.00140	.30820	.13550	.03810	.06240	.07190
.904	-3.810	- 32560	.11550	-.00980	.00270	-.00060	.30650	.14000	.03620	06070	.06950
.904	-2.690	-.25330	.08330	-.01150	00160	-.00070	.30690	.13980	.03690	.06070	.06940
.904	-1.590	-.18380	.05160	-.01450	.00320	-.00100	.30460	.14000	.03610	05970	.06870
.904	-.470	- 11470	.02360	-.01570	.00290	-.00100	.30280	14030	.03520	.05910	.06800
.904	.650	-.04090	-.00610	-.01390	.00100	-.00100	.29920	.14050	.03540	.05750	06570
.904	1.780	.03650	-.03860	-.01250	-.00060	-.00060	.29710	.13900	.03490	.05780	.06530
.904	2.920	.10410	-.06110	-.01760	.00110	-.00180	.29760	.13830	.03490	.05900	.06530
.904	5 180	.23600	-.10110	-.01980	-.00050	-.00140	.30310	.13960	.03550	.06199	.06690
.904	-.450	-.10720	.02000	-.01680	.00350	-.00100	.30650	.14250	.03630	05950	.06800
	GRADIENT	06413	-.02650	-.00079	-.00036	-.00011	-.00165	-.00020	- 00027	- 00042	-.00076

RUN NO. 33/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.203	-6.210	- 52690	.23140	-.00710	-.00120	-.00110	.47390	.26450	.05200	.07300	.08420
1.203	-3.840	-.34290	.15260	-.01000	.00100	-.00110	.47000	26760	.05150	.06920	.08160
1.203	-2.670	-.26150	.11710	-.01240	.00240	-.00130	.46960	.26940	.05160	.06810	.08040
1 203	-1.520	-.18080	.07900	-.00930	.00120	-.00080	.46850	.26870	.05200	.06770	.07990
1 203	-.370	-.10140	.04250	-.00970	.00100	-.00040	.46920	.27070	.05180	.06700	.07960
1.203	.770	-.02200	.00670	-.01550	.00390	-.00100	.46760	26860	05260	.06740	.07880
1.203	1.930	.05640	-.02820	-.01830	.00580	-.00140	46410	.26660	.05260	.06700	.07770
1.203	3.090	.13410	-.06000	-.02160	.00660	-.00150	.46460	.26500	.05360	.06920	.07670
1.203	5.420	.28930	-.12010	-.02390	.00420	-.00090	.46250	.25840	05500	.07260	.07640
1.203	-.360	-.09580	.03930	-.01110	.00150	-.00080	.47060	26970	.05270	.06760	.08040
	GRADIENT	.06895	-.03100	-.00164	.00081	-.00005	-.00087	- 00042	.00028	-.00008	-.00066

MSFC TWT 600 (FA14) O1T1S1A1R1K1F1OF13 (R1L022) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 86/ 1 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.33910	.13340	-.00750	.00160	-.00140	.29600	.24900	.01350	.01580	.01770
3.479	-3.600	-.24350	.10340	-.00800	.00150	-.00140	.28720	.24020	.01360	.01560	.01760
3.479	-2.500	-.19900	.08910	-.00810	.00150	-.00160	.28310	.23650	.01360	.01550	.01740
3.479	-1.400	-.14920	.07380	-.00900	.00220	-.00150	.28030	.23370	.01360	.01560	.01730
3.479	-.320	-.10590	.06090	-.00930	.00200	-.00150	.27650	.23040	.01350	.01550	.01690
3.479	.760	-.06390	.04930	-.00890	.00230	-.00100	.27270	.22650	.01360	.01570	.01670
3.479	1.850	-.01680	.03360	-.00850	.00160	-.00060	.26960	.22370	.01370	.01540	.01670
3.479	2.930	.03030	.01750	-.00940	.00120	-.00060	.26650	.22130	.01370	.01510	.01640
3.479	5.110	.12340	-.01180	-.00990	.00100	-.00050	.26140	.21710	.01370	.01470	.01570
3.479	-.310	-.10580	.06140	-.00940	.00190	-.00150	.27640	.23050	.01350	.01540	.01690
	GRADIENT	.04174	-.01291	-.00016	-.00002	.00016	-.00318	-.00294	.00002	-.00005	-.00018

RUN NO. 85/ 1 RN/L = 5.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.430	- 30860	.12800	.00250	-.00070	.00020	.26790	.24620	.00610	.00780	.00770
4.959	-3.370	-.22970	.10040	.00240	-.00100	.00000	.25480	.23270	.00620	.00790	.00780
4.959	-2.330	-.19150	.08930	.00070	-.00030	.00010	.24950	.22680	.00660	.00800	.00800
4.959	-1 300	-.15650	.07840	.00030	-.00180	-.00070	.24390	.22110	.00660	.00800	.00800
4.959	-.270	-.11250	.06440	-.00130	-.00120	-.00090	.24060	.21840	.00650	.00780	.00770
4 959	.760	-.07670	.05430	-.00880	.00180	-.00100	.23690	.21480	.00650	.00780	.00770
4.959	1.790	-.03630	.04340	-.00300	.00130	-.00080	.23540	.21300	.00660	.00790	.00780
4.959	2.830	.01420	.02570	-.01200	.00460	-.00090	.23200	.21040	.00650	.00760	.00730
4.959	4.900	.08840	.00320	-.02290	.00700	.00000	.22370	.20190	.00680	.00740	.00750
4.959	-.260	-.10940	.06380	-.00130	-.00100	.00000	.24260	.22050	.00650	.00780	.00760
	GRADIENT	.03883	-.01185	-.00287	.00103	-.00005	-.00356	-.00347	.00004	-.00006	-.00006

MSFC TWT 600 (FA14) 01T1S1A1R1K1F12F11 (R1L023) (10 OCT 75)

REFERENCE DATA

SREF = 2680.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1280.0000 IN. YMRP = .0000 IN. YT
BREF = 1280.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 42/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.599	-5.730	-.47650	.17140	.00310	-.00450	-.00010	.24880	.10570	.03500	.05390	.05400
.599	-3.580	-.35350	.12450	-.00950	.00460	.00030	.24990	.11480	.03360	.05550	.04580
.599	-2.540	-.29380	.10150	-.01510	.00980	.00020	.24950	.11430	.03290	.05500	.04720
.599	-1.460	-.23540	.08370	-.01650	.00990	.00060	.24830	.11250	.03230	.05600	.04730
.599	-.400	-.18180	.06780	-.01670	.01100	.00070	.24820	.11280	.03220	.05540	.04770
.599	.700	-.11650	.06220	-.01410	.00380	.00000	24520	.10940	.03260	.05470	.04850
.599	1.760	-.05800	.04450	-.01650	.00490	.00010	.24330	.11170	.03130	.05440	.04580
.598	2.910	.02030	.02780	-.01290	.00660	.00170	.24000	.10360	.03200	.05490	.04930
.598	5.000	.13300	-.01620	-.02150	.00710	.00130	.23330	.10040	.03110	.05520	.04640
.599	-.360	-.17860	.07990	-.01150	.00340	.00030	.24750	.11020	.03300	.05400	.05020
	GRADIENT	.05688	-.01525	-.00080	-.00016	.00013	-.00192	-.00166	-.00026	-.00006	.00006

RUN NO. 41/ 0 RN/L = 8.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.904	-6.140	-.49030	.16940	-.00820	.00450	-.00010	.30230	.13140	.03930	.05850	.07290
.904	-3.830	-.33020	.11270	-.01390	.00670	-.00050	.30290	.13950	.03790	.05690	.06940
.904	-2.680	-.25020	.08460	-.01650	.00760	-.00060	.29840	.13820	.03730	.05550	.06740
.904	-1.540	-.17840	.08030	-.01780	.00800	-.00090	.29670	.13660	.03660	.05700	.06840
.904	-.400	-.10840	.03740	-.01700	.00730	-.00080	.29530	.13730	.03660	.05560	.06560
.904	.740	-.03410	.01120	-.01880	.00850	-.00080	.29280	.13850	.03530	.05470	.06420
.904	1.870	.03730	-.01510	-.01840	.00730	-.00100	.28960	.13580	.03460	.05550	.06370
.904	2.990	.10050	-.03670	-.02060	.00690	-.00180	.28840	.13310	.03500	.05670	.06350
.904	5.250	.21520	-.06640	-.02060	.00640	-.00150	.28610	.12940	.03410	.05910	.06330
.904	-.390	-.10480	.03630	-.02120	.00920	-.00140	.29630	.13730	.03660	.05610	.06610
	GRADIENT	.06318	-.02168	-.00078	.00002	-.00014	-.00204	-.00060	-.00048	-.00009	-.00086

RUN NO. 40/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.199	-6.400	-.57120	.22900	.00060	-.00500	.00010	.46180	.25940	.04940	.07040	.08240
1.199	-3.950	-.36280	.14610	-.00200	-.00230	-.00040	.46010	.26160	.04970	.06730	.08130
1.199	-2.750	-.27290	.11120	-.00570	-.00040	-.00060	.45830	.26190	.04980	.06590	.08060
1.199	-1.550	-.18460	.07700	-.00890	.00110	-.00080	.45690	.26130	.05020	.06490	.08030
1.199	-.360	-.09830	.04330	-.01160	.00290	-.00100	.45540	.25980	.05060	.06590	.07890
1.199	.820	-.01700	.01350	-.01310	.00390	-.00110	.45280	.25720	.05170	.06570	.07800
1.199	2.010	.06360	-.01650	-.01500	.00510	-.00110	.44950	.25520	.05200	.06550	.07660
1.199	3.210	.14240	-.04470	-.01740	.00690	-.00140	.44810	.25240	.05240	.06710	.07610
1.199	5.670	.30110	-.09990	-.02150	.00970	-.00100	.44790	.24790	.05350	.07020	.07610
1.199	-.340	-.09180	.04060	-.01110	.00300	-.00080	.45650	.25920	.05140	.06650	.07930
	GRADIENT	.07061	-.02671	-.00207	.00124	-.00013	-.00173	-.00135	.00042	-.00002	-.00078

ORIGINAL PAGE IS
OF POOR QUALITY

MSFC TWT 600 (FA14) , 01T1S1A1R1K1F12F11 (R1L023) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT, XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 79/ 1 RN/L = 6.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.790	-.34830	.13380	-.00790	.00200	-.00150	.29560	.24760	.01350	.01620	.01810
3.479	-3.600	-.25110	.10530	-.00860	.00160	-.00120	.28710	.23940	.01340	.01620	.01800
3.479	-2.520	-.20670	.09050	-.00810	.00140	-.00100	.28490	.23720	.01360	.01600	.01800
3.479	-1.420	-.16090	.07880	-.00780	.00150	-.00120	.28190	.23460	.01370	.01580	.01770
3.479	-.320	-.11500	.06690	-.00830	.00130	-.00100	.27850	.23140	.01360	.01590	.01750
3.479	.760	-.06780	.05370	-.00800	.00130	-.00080	.27580	.22910	.01360	.01570	.01730
3.479	1.850	-.02200	.03900	-.00760	.00090	-.00040	.27310	.22690	.01380	.01530	.01710
3.479	2.960	.02490	.02440	-.00720	.00060	-.00070	.27110	.22480	.01400	.01510	.01710
3.479	5.130	.12580	-.00680	-.00840	.00060	-.00040	.26370	.21810	.01390	.01460	.01690
3.479	-.320	-.11380	.06690	-.00830	.00140	-.00180	.27880	.23170	.01360	.01590	.01740
	GRADIENT	.04217	-.01212	.00016	-.00014	.00010	-.00254	-.00228	.00007	-.00016	-.00016

RUN NO. 80/ 1 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.450	-.31790	.12510	.00180	.00000	-.00140	.26360	.24190	.00620	.00780	.00760
4.959	-3.400	-.26510	.11260	.02000	.00790	-.00770	.25340	23120	.00640	.00790	.00770
4.959	-2.340	-.20050	.09070	-.00190	.00080	-.00160	.24760	.22540	.00650	.00790	.00770
4.959	-1.310	-.15940	.07900	-.00250	-.00060	-.00170	.24380	22140	.00660	.00790	.00780
4.959	-.270	-.12140	.07030	-.00150	-.00110	-.00150	.23980	.21720	.00670	.00790	.00790
4.959	.760	-.08320	05980	-.00170	-.00080	-.00110	.23720	.21480	.00660	.00780	.00790
4.959	1 790	-.03910	.04630	-.00360	-.00120	-.00100	.23370	.21140	.00650	.00760	.00800
4.959	2.850	.00760	.03120	-.00380	-.00090	- 00100	.23130	.20890	00670	.00760	.00800
4.959	4.930	.09550	.00330	- 00160	-.00360	.00060	.22250	.20060	.00670	.00730	.00770
4.959	-.270	- 12430	.07200	-.00300	-.00100	-.00200	.24110	.21850	.00680	.00770	.00810
	GRADIENT	.04193	-.01245	-.00158	-.00093	.00066	-.00350	-.00348	.00003	-.00007	.00001

MSFC TWT 600 (FA14) 01T1S1A1R1K1F12F14 (R1L024) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 49/ 0 RN/L = 5.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.600	-5.680	-.47750	.19570	.00060	-.00010	.00090	.23870	.09760	.03450	.05790	.04860
.600	-3.530	-.35540	.14700	-.00030	-.00150	.00120	.24140	.09730	.03430	.05560	.05400
.600	-2.490	-.29660	.12510	-.00130	-.00100	.00100	.23940	.09620	.03380	.05590	.05330
.600	-1.430	-.23920	.10410	-.00620	.00280	.00130	.24040	.09760	.03340	.05580	.05350
.600	-.360	-.17650	.08080	-.01430	.00710	.00050	.23810	.09830	.03350	.05360	.05270
.600	.700	-.11980	.06170	-.02040	.01070	.00000	.23640	.10560	.03280	.05310	.04470
.600	1.760	-.05860	.03930	-.01340	.00660	.00080	.23600	.09750	.03280	.05370	.05180
.600	2.860	.00540	.01770	-.01270	.00640	.00130	.23570	.09710	.03270	.05410	.05170
.600	4.980	.12630	-.02420	-.01800	.00860	.00150	.22860	.09070	.03180	.05530	.05060
.600	-.360	-.18060	.08250	-.01120	.00600	.00120	.23980	.09830	.03390	.05400	.05360
	GRADIENT	.05660	-.02009	-.00208	.00120	.00002	-.00134	-.00046	-.00027	-.00015	-.00046

RUN NO. 50/ 0 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.902	-6.050	-.48420	.19090	-.01220	.00460	-.00050	.29270	.12660	.03700	.06190	.06710
.902	-3.770	-.33210	.12610	-.01260	.00570	-.00050	.29310	.13180	.03610	.06050	.06460
.902	-2.680	-.26060	.09310	-.01140	.00590	.00000	.29400	.13120	.03580	.06070	.06600
.902	-1.580	-.18910	.05840	-.01740	.00810	-.00060	.29470	.13050	.03680	.06130	.06500
902	-.460	-.11970	.03020	-.01540	.00720	-.00010	.29170	.13110	.03640	.06000	.06410
.902	.660	-.04710	.00080	-.01340	.00600	-.00040	.28940	.13010	.03570	.05970	.06380
.902	1.780	.02370	-.02690	-.01650	.00700	-.00040	.28860	.12960	.03580	.06030	.06280
.902	2.910	.08590	-.04800	-.01560	.00530	-.00090	.28380	.12390	.03570	.06240	.06160
.902	5.180	.20330	-.07650	-.01760	.00480	-.00160	.28380	.12490	.03480	.06240	.06160
.902	-.450	-.11570	.02800	-.01280	.00660	.00000	.29420	.13510	.03560	.05950	.06370
	GRADIENT	.06296	-.02627	-.00049	-.00004	-.00006	-.00141	-.00088	-.00007	.00011	-.00057

RUN NO. 51/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.199	-6.220	-.52840	.23130	.00210	-.00520	.00060	.45970	.25660	.04910	.07190	.08200
1.199	-3.850	-.34430	.15260	-.00250	-.00180	.00000	.45710	.25820	.04880	.06860	.08140
1.199	-2.680	-.26030	.11570	-.00540	.00000	-.00050	.45710	.25970	.04890	.06780	.08060
1.199	-1.520	-.18080	.08100	-.00780	.00120	-.00080	.45760	.26010	.04970	.06730	.08040
1.199	-.370	-.09990	.04130	-.00590	.00140	-.00010	.45760	.26020	.05040	.06630	.08060
1.199	.770	-.02300	.00760	-.00990	.00290	-.00000	.45300	.25770	.05060	.06580	.07950
1.199	1.920	.05340	-.02590	-.01160	.00520	-.00130	.45130	.25840	.05080	.06450	.07740
1.199	3.090	.12930	-.05650	-.01490	.00630	-.00150	.45080	.25750	.05110	.06640	.07570
1.199	5.430	.27930	-.11310	-.01910	.00850	-.00190	.44730	.25280	.05170	.06780	.07490
1.199	-.360	-.09720	.04240	-.00800	.00250	-.00070	.45520	.26180	.05000	.06350	.07980
	GRADIENT	.06828	-.03045	-.00160	.00113	-.00019	-.00106	-.00022	.00036	-.00045	-.00076

ORIGINAL PAGE IS
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MSFC TWT 600 (FA14) OITISIAIRIKIF12F14 (RIL024) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 78/ 1 RN/L = 6.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.34020	.13480	-.00820	.00200	-.00150	.28800	.23940	.01360	.01650	.01840
3.479	-3.600	-.24480	.10390	-.00730	.00140	-.00130	.27990	.23130	.01370	.01660	.01820
3.479	-2.500	-.20170	.09060	-.00750	.00130	-.00130	.27620	.22790	.01390	.01630	.01800
3.479	-1.410	-.15570	.07740	-.00780	.00160	-.00140	.27340	.22540	.01380	.01610	.01790
3.479	-.320	-.10990	.06430	-.00810	.00170	-.00140	.26990	.22250	.01370	.01600	.01760
3.479	.760	-.06920	.05320	-.00780	.00170	-.00100	.26710	.21970	.01380	.01610	.01740
3.479	1.840	-.02210	.03750	-.00800	.00160	-.00080	.26380	.21690	.01390	.01560	.01720
3.479	2.830	.02240	.02290	-.00950	.00190	-.00090	.26120	.21490	.01380	.01540	.01700
3.479	5.110	.11690	-.00650	-.00940	.00170	.00070	.25500	.21040	.01380	.01500	.01570
3.479	-.310	-.10850	.06450	-.00820	.00180	-.00140	.27020	.22290	.01370	.01600	.01750
	GRADIENT	04098	-.01227	-.00025	.00007	.00009	-.00286	-.00253	.00001	-.00016	-.00019

RUN NO. 77/ 1 RN/L = 5.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.440	-.31740	.13160	-.00030	.00020	-.00130	.26090	.23850	.00630	.00810	.00790
4.959	-3.390	-.24120	.10670	-.00050	.00020	-.00140	.24830	.22600	.00630	.00810	.00780
4.959	-2.340	-.19730	.09280	-.00090	-.00070	-.00130	.24300	.22040	.00640	.00820	.00790
4.959	-1.320	-.15350	.07940	-.00240	.00090	-.00150	.23910	.21610	.00660	.00830	.00790
4.959	-.270	-.11830	.06960	-.00120	.00060	-.00090	.23560	.21310	.00650	.00800	.00780
4.959	.760	-.08300	.05910	-.00310	-.00020	-.00080	.23100	.20830	.00660	.00820	.00780
4.959	1.790	-.04510	.05090	-.00200	.00050	-.00070	.22800	.20570	.00670	00790	.00770
4.959	2.830	.00190	.03460	-.00380	-.00040	-.00010	.22500	.20280	.00670	.00760	.00780
4.959	4.890	.07800	.00650	-.00390	-.00090	.00000	.21660	.19480	.00660	.00740	.00760
4.959	-.270	-.12110	.06960	-.00280	-.00030	-.00090	.23460	.21240	.00660	.00790	.00770
	GRADIENT	.03816	-.01163	-.00040	-.00009	.00019	-.00370	-.00362	.00004	-.00010	-.00003

MSFC TWT 600 (FA14) O1T1S1A1R1K1F14F15 (R1L025) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 978.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 60/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.595	-5.640	-.44120	.17810	-.00610	.00390	.00190	.11970	.26030	.03610	.06010	.04440
.595	-3.530	-.32620	.13180	-.00080	.00050	.00160	.11690	.25890	.03570	.05740	.04890
.595	-2.460	-.26720	.11180	-.00610	.00280	.00170	.11380	.25780	.03550	.05700	.05150
.595	-1.400	-.21030	.09190	-.01040	.00430	.00130	.11430	.25660	.03500	.05560	.05170
.595	-.330	-.15430	.07160	-.00940	.00420	.00110	.11650	.25590	.03470	.05540	.04920
.595	-.330	-.14770	.06930	-.00820	.00430	.00130	.11260	.25540	.03440	.05550	.05290
.595	.720	-.09310	.05030	-.01150	.00580	.00170	.11670	.25350	.03400	.05380	.04980
.595	1.790	-.03240	.03010	-.00850	.00430	.00200	.11080	.25140	.03330	.05320	.05410
.595	2.890	03230	.00860	-.00780	.00330	.00210	.10730	.24890	.03350	.05510	.05300
.595	5.010	.15630	-.03300	-.01340	.00570	.00210	.10150	.24200	.03330	.05620	.05100
	GRADIENT	.05564	-.01923	-.00090	.00043	.00008	-.00109	-.00154	-.00040	-.00054	.00050

RUN NO. 59/ 0 RN/L = 6.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
.900	-6.010	-.45870	.17760	-.01040	.00610	.00040	.13360	.31160	.04030	.06600	.07170
.900	-3.750	-.31560	.12190	-.01270	.00720	-.00010	.13070	.30240	.03840	.06470	.06860
.900	-2.630	-.24570	.09270	-.01120	.00640	.00000	.13810	.30540	.03720	.06320	.06690
.900	-1.530	-.17480	.05890	-.01470	.00860	.00000	.13580	.30460	.03740	.06320	.06820
.900	-.410	-.10530	.02980	-.01100	.00610	.00020	.13660	.30260	.03650	.06280	.06660
.900	-.410	-.10060	.02570	-.01310	.00710	.00000	.14480	.30710	.03600	.06260	.06370
.900	.700	-.03260	-.00160	-.01350	.00680	-.00030	.13770	.30040	.03630	06150	.06490
.900	1.820	.03430	- 02760	-.01650	.00830	-.00070	.13440	.29840	.03680	.06190	.06530
.900	2.950	.09850	-.05190	-.01660	.00730	-.00140	.12810	.29450	.03760	.06300	.06580
.900	5.200	22320	-.09000	-.01960	.00840	-.00130	.13260	.29520	.03560	.06470	.06230
	GRADIENT	.06226	-.02633	-.00068	.00007	-.00018	-.00043	-.00134	-.00014	-.00030	-.00048

RUN NO. 58/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
1.197	-6.180	-.48450	.20060	.00030	-.00180	.00100	.26740	.47280	.04950	.07410	.08180
1.197	-3.780	-.30280	.12670	-.00290	-.00010	.00070	.27020	.47110	.04810	.07220	.08060
1.197	-2.630	-.22380	.09500	-.00610	.00120	.00030	.27300	47060	.04750	.07070	.07940
1.197	-1.450	-.14500	.06400	-.00790	.00230	.00030	.27320	.47040	.04740	.07010	.07970
1.197	-.280	-.06620	.03340	-.01010	.00420	-.00020	.27430	.46950	.04730	.06920	.07870
1.197	-.270	-.06270	.03310	-.01200	.00570	-.00040	.27630	.46890	.04650	.06720	.07890
1.197	.880	.00950	.00470	-.00960	.00350	-.00030	.27300	46650	.04700	.06860	.07790
1.197	2.030	.07840	-.02220	-.01130	.00530	-.00030	.27250	.46340	.04700	.06740	.07650
1.197	3.190	.14910	-.05470	-.01230	.00490	-.00050	.27040	.46190	.04720	.06780	.07650
1.197	5.500	.29590	-.11140	-.01340	.00380	-.00080	.26700	.45940	.04810	.06960	.07470
	GRADIENT	.06495	-.02574	-.00124	.00075	-.00017	-.00002	-.00141	-.00013	-.00066	-.00061

MSFC TWT 600 (FA14) O1T1S1A1R1K1F14F15 (RIL025) (22 NOV 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 94/ 0 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
3.479	-5.730	-.32810	.13790	-.00020	-.00100	-.00030	.24870	.29580	01260	.01690	.01760
3.479	-3 550	-.22990	.10480	-.00160	.00070	-.00010	.23950	.28680	.01320	.01660	.01750
3.479	-2.460	-.18410	.09010	-.00240	.00120	-.00020	.23630	.28300	.01310	.01640	.01720
3.479	-1.380	-.14210	.07780	-.00270	.00120	-.00020	.23370	.27990	.01310	.01610	.01700
3.479	-.280	-.08970	.06170	-.00290	.00160	-.00020	.23120	.27700	.01320	.01590	.01670
3.479	-.290	-.09910	.06580	- 00290	.00170	-.00130	.23150	.27730	.01310	.01580	.01690
3.479	.780	-.05820	.05440	-.00260	.00150	-.00020	.22860	.27390	.01300	.01550	.01680
3.479	1.860	-.01640	.04090	-.00220	.00070	-.00040	.22530	.27030	.01300	.01510	.01690
3.479	2.950	.03310	.02390	-.00230	.00080	-.00030	.22300	.26790	.01340	.01480	.01670
3.479	5.110	.12240	-.00690	-.00710	.00260	-.00060	.21800	.26170	.01370	.01430	.01570
	GRADIENT	.03988	-.01203	-.00005	-.00001	-.00003	-.00253	-.00291	.00001	-.00028	-.00011

RUN NO. 93/ 0 RN/L = 5.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CA	CABO	CABS	CABE
4.959	-5.430	-.29060	.12400	.00420	-.00060	.00020	.24450	.26470	.00470	.00780	.00770
4.959	-3.360	-.21470	.10090	.00370	-.00100	.00000	.23490	.25520	.00470	.00790	.00770
4.959	-2.350	- 17930	.08880	.00220	-.00020	.00060	.22980	.25070	.00540	.00790	.00760
4.959	-1.310	-.14120	.07940	.00180	-.00010	.00080	.22510	.24600	.00510	.00800	.00780
4.959	-.260	-.09990	.06770	.00000	-.00010	.00000	.21930	.24100	.00600	.00790	.00780
4.959	-.260	-.10310	.06900	.00140	-.00050	.00030	.22000	.24110	.00550	.00770	.00780
4.959	.760	-.06790	.05970	.00110	-.00070	.00050	.21440	.23560	.00560	.00790	.00770
4.959	1.790	-.03290	.04990	.00080	-.00060	.00010	.21480	.23550	.00530	.00760	.00780
4.959	2.830	.01100	.03640	-.00220	.00060	-.00070	.21100	.23100	.00490	.00750	.00760
4.959	4.880	.08700	.01270	-.00280	-.00030	.00000	.20610	.22530	.00420	.00750	.00750
	GRADIENT	.03648	-.01044	-.00074	.00007	-.00008	-.00346	-.00362	-.00008	-.00006	-.00002

MSFC TWT 600 (FA14) O1TIS1A1R1K1F10F11 (R1L026) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

ORIGINAL PAGE IS OF POOR QUALITY

RUN NO. 36/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.600	-5.740	-.48350	.17460	.00360	-.00120	.00100	.25380	.11310	.03480	.05410	.05170
.600	-3.600	-.36300	.13520	-.00580	.00380	.00060	.25580	.11620	.03290	.05290	.05360
.600	-2.520	-.30250	.11760	-.01120	.00680	.00000	.25580	.11400	.03320	.05420	.05430
.600	-1.440	-.23990	.10050	-.01080	.00590	.00040	.25360	.11770	.03230	.05410	.04930
.600	-.360	-.17970	.08210	-.01420	.00740	.00000	.25240	.11630	.03310	.05290	.05000
.600	.740	-.10810	.07090	-.01230	.00790	.00120	.25400	.11450	.03210	.05250	.05480
.600	1.810	-.04970	.05380	-.01470	.00860	.00110	.25030	.11630	.03160	.05250	.05070
.600	2.890	.01640	.03190	-.01590	.00940	.00120	.24790	.10920	.03130	.05300	.05430
.600	5.040	.14050	-.00840	-.01660	.00850	.00170	.24130	.10390	03140	.05520	.05060
.600	-.330	-.16710	.08930	-.00890	.00650	.00160	.25330	.11550	.03150	.05260	.05350
	GRADIENT	.05858	-.01541	-.00128	.00074	.00016	-.00113	-.00071	-.00027	-.00016	.00001

RUN NO. 35/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.899	-6.140	-.48950	.16530	-.00960	.00640	-.00060	.30280	.13340	03910	.05880	.07140
.899	-3.830	- 32460	.10840	-.01230	.00780	-.00080	.30030	.13960	.03770	.05570	.06720
.899	-2.680	- 25120	.08330	-.01310	.00790	-.00060	.29770	.13860	.03710	.05620	.06570
899	-1.540	-.18300	.06320	-.01540	.00900	-.00070	.29640	.13840	.03690	.05580	.06510
.899	-.390	-.11250	.04270	-.01950	.01050	-.00120	.29400	.13920	.03600	.05490	.06380
.899	.750	-.03960	.01860	-.01620	.00830	-.00110	.29060	.13730	.03600	.05410	.06310
.899	1.890	.03240	-.00600	-.01650	.00770	-.00120	.28950	.13730	.03550	.05380	.06270
.899	3.030	.10100	-.02710	-.01640	.00670	-.00170	.29080	.13850	.03450	.05400	.06150
.899	5.320	.22550	-.05710	-.02020	.00770	-.00160	.29160	.13470	.03510	.05710	.06450
.899	-.390	-.10210	.03500	-.01660	.00930	-.00080	.28920	.14380	.03610	.05510	.06400
	GRADIENT	.06209	-.01967	-.00062	-.00014	-.00013	-.00177	-.00022	-.00043	-.00036	-.00078

RUN NO. 34/ 0 RN/L = 6.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.201	-6.370	-.56100	.22650	-.00060	.00030	.00020	.46830	.26200	.05170	.07140	.08310
1.201	-3.920	-.35370	.14480	-.00250	.00210	.00000	.46830	.26710	.05120	.06810	.08170
1.201	-2.720	-.26810	.11280	-.00490	.00300	-.00010	46640	.26830	.05080	.06550	.08070
1.201	-1.510	-.17960	.08140	-.00840	.00440	-.00030	.46520	.26830	.05090	.06580	.07990
1.201	-.320	-.09420	.04910	-.01130	.00570	-.00060	.46370	.26870	.05130	.06480	.07880
1 201	.880	-.00900	.01930	-.01370	.00780	-.00090	.46300	.26800	.05160	.06490	.07830
1.201	2.070	.06770	-.00530	-.01550	.00880	- 00110	.46250	.26690	.05180	.06600	.07760
1.201	3.290	.14440	-.02930	- 01750	.00880	-.00130	.46380	26420	.05310	.06840	07800
1.201	5.670	.30320	-.07930	-.02240	.00960	-.00130	46280	.25930	.05420	.07160	.07750
1.201	-.300	-.08660	.04600	-.01120	.00620	-.00070	.46470	.26810	.05170	.06520	.07950
	GRADIENT	.06954	-.02442	-.00213	.00104	-.00019	-.00070	-.00035	.00025	-.00003	-.00056

MSFC THT 600 (FA14) OITISIAIRIKIFIOFII (RIL026) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 83/ 1 RN/L = 6.35 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.760	-.33830	.13380	-.00020	.00010	-.00030	.30570	.25810	.01340	.01600	.01810
3.479	-3.570	-.23870	.10350	-.00130	.00110	-.00060	.29750	.25020	.01330	.01590	.01790
3.479	-2.480	-.19160	.08910	-.00090	.00070	-.00060	.29380	.24690	.01340	.01580	.01770
3.479	-1.380	-.14560	.07660	-.00190	.00130	-.00070	.28960	.24340	.01330	01550	.01730
3.479	-.280	-.09940	.06410	-.00220	.00170	-.00070	.28520	.23950	.01320	.01530	.01700
3.479	.800	-.05380	.05150	-.00330	.00170	-.00080	.28120	.23640	.01320	.01490	.01660
3.479	1.880	-.01060	.03760	-.00280	.00140	-.00030	.27810	.23340	.01340	.01500	.01620
3.479	2.980	.03780	.02020	-.00310	.00030	.00000	.27480	.23010	.01350	.01480	.01620
3.479	5.150	.13340	-.00970	-.00430	.00010	00000	.26940	.22450	.01360	.01440	.01670
3.479	-.280	-.09960	.06490	-.00300	.00160	-.00060	.28550	.24000	.01320	.01520	.01700
	GRADIENT	.04201	-.01237	-.00035	-.00002	.00008	-.00353	-.00309	.00002	-.00018	-.00029

RUN NO. 84/ 1 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.440	-.30030	.11680	.00800	-.00050	.00100	.27060	.24880	.00610	.00780	.00770
4.959	-3.370	- 22400	.09530	.00580	-.00080	.00130	.25800	.23620	.00620	.00780	.00770
4.959	-2.330	-.18600	.08480	.00540	-.00100	.00100	.25330	.23130	.00640	.00780	.00770
4 959	-1.300	- 14800	07330	.00530	-.00060	.00100	.25000	.22790	.00640	.00780	.00770
4.959	-.260	-.10710	.06280	.00640	-.00090	.00070	.24620	.22410	.00640	.00780	.00780
4.959	.760	-.07450	05670	.00150	.00100	.00080	.24280	.22040	.00660	.00790	.00780
4.959	1.820	- 03940	.04750	.00270	.00050	.00070	.23990	.21790	.00650	.00760	.00780
4 959	2.860	.00860	.03230	-.01220	.00600	.00080	.23730	.21550	.00650	.00760	.00760
4.959	4.900	.08650	.00800	.00000	-.00210	.00020	.22760	.20620	.00650	.00740	.00730
4.959	-.260	-.10980	.06440	.00330	-.00040	.00050	.24750	.22560	.00660	.00770	.00760
	GRADIENT	.03728	-.01023	-.00141	.00026	-.00010	-.00350	-.00345	.00003	-.00005	-.00004

MSFC TWT 600 (FA14) 01T1S1A1R1K1F14F15F16 (R1L027) (10, OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 55/ 0 RN/L = 5.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.600	-5.650	-.44410	.17750	.00110	.00000	.00220	.25400	.10800	.03750	.06330	.04500
.600	-3.540	-.33800	.13820	.00590	-.00420	.00240	.25430	.10390	.03600	.06000	.05420
.600	-2.470	-.27340	.11500	.00680	-.00450	.00250	.25420	.10660	.03620	.05910	.05210
.600	-1.400	-.21530	.09460	.00260	-.00260	.00230	.25340	.10460	.03560	.05900	.05410
.600	-.330	-.15480	.07330	-.00140	-.00060	.00180	.25050	.10460	.03430	.05760	.05390
.600	.720	-.09730	.05250	.00050	-.00130	.00200	.24930	.10320	.03530	.05760	.05300
.600	1.790	-.03700	.03190	-.00660	.00250	.00170	.24720	.09820	.03530	.05720	.05640
.600	2.870	.02760	.01090	-.00890	.00340	.00200	.24410	.09810	.03370	.05720	.05500
.600	5.000	.14390	-.02800	-.01240	.00470	.00210	.23670	.09240	.03310	.05920	.05180
.600	-.340	-.15680	.07360	.00350	-.00340	.00220	.24940	.10310	.03520	.05780	.05310
	GRADIENT	.05633	-.01945	-.00242	.00121	-.00006	-.00204	-.00153	-.00034	-.00017	.00000

RUN NO. 56/ 0 RN/L = 6.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.904	-6.020	-.46320	.17950	-.01440	.00940	.00000	.31580	.12590	.04110	.07450	.07410
.904	-3.750	-.31260	.12030	-.01410	.00970	-.00030	.31520	.13510	.03900	.07000	.07090
.904	-2.630	-.24140	.09180	-.01380	.00980	-.00010	.31240	.13040	.03920	.07080	.07180
.904	-1.520	-.17480	.06170	-.01660	.01050	-.00040	.30870	.12890	.03830	.06950	.07190
.904	-.410	-.11130	.03540	-.01710	.01010	-.00060	.30620	.12690	.03880	.06790	.07250
.904	.700	-.03030	-.00170	-.01870	.01090	-.00140	.30710	.13290	.03810	.06590	.07000
.904	1.830	.04450	-.03320	-.01840	.01030	-.00150	.30440	.13230	.03760	.06510	.06930
.904	2.960	.10570	-.05690	-.01380	.00640	-.00190	.30100	.12700	.03780	06700	.06890
.904	5.190	.21410	-.08460	-.01870	.00780	-.00150	.29580	.11950	.03800	.06950	.06860
.904	-.410	-.10430	.03010	-.01730	.01050	-.00060	.31340	.13390	03880	.06870	.07190
	GRADIENT	.06304	-.02702	-.00033	-.00027	-.00028	-.00193	-.00053	-.00022	-.00077	-.00041

RUN NO. 57/ 0 RN/L = 6.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.200	-6.180	-.48690	.20490	-.00120	-.00030	.00030	.47210	.25900	.04960	.07650	.09690
1.200	-3.780	-.30870	.13240	-.00690	.00280	-.00010	.47190	.26340	.04860	.07390	.08580
1.200	-2.620	-.22790	.10060	-.00850	.00440	-.00020	.47050	.26550	.04790	.07220	.08480
1.200	-1.440	-.14950	.07060	-.00950	.00470	-.00020	.47000	.26610	.04790	.07130	.08460
1.200	-.260	-.07110	.04100	-.01000	.00450	-.00040	.46950	.26640	.04790	.07090	.08410
1.200	.900	.00620	.01090	-.00950	.00390	-.00040	.46700	.26390	.04830	.07110	.08360
1.200	2.050	.07410	-.01470	-.00890	.00390	-.00050	.46380	.26130	.04810	.07090	.08340
1.200	3.200	.14310	-.04630	-.01010	.00290	-.00080	.46100	.25960	.04800	.07080	.08250
1.200	5.500	.29180	-.10660	-.01170	.00310	-.00080	.45760	.25420	.04930	.07230	.08160
1.200	-.250	-.06600	.03920	-.01140	.00530	-.00060	.46860	.26610	.04800	.07040	.08400
	GRADIENT	.06485	-.02534	-.00032	-.00005	-.00009	-.00150	-.00067	-.00003	-.00037	-.00042

MSFC THT 600 (FA14) O)T1S1A1R1K1F14F15F16 (RIL027) (10 OCT 75)

REFERENCE DATA

SREF = 2880.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1280.0000 IN. YMRP = .0000 IN. YT
BREF = 1280.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 85/ 1 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.720	-.33190	.13870	.00040	-.00010	.00010	.29440	.24550	.01280	.01700	.01890
3.479	-3.640	-.23360	.10590	-.00160	.00100	-.00040	.28510	.23610	.01330	.01680	.01870
3.479	-2.460	-.16910	.09100	-.00170	.00140	-.00020	.28210	.23340	.01350	.01650	.01860
3.479	-1.370	-.14310	.07730	-.00200	.00150	-.00020	.27860	.23040	.01340	.01630	.01840
3.479	-.280	-.09990	.06520	-.00160	.00190	-.00010	.27620	.22860	.01340	.01600	.01810
3.479	.790	-.06050	.05440	-.00200	.00160	-.00020	.27220	.22490	.01340	.01580	.01800
3.479	1.870	-.01860	.04090	-.00150	.00120	-.00020	.27010	.22330	.01340	.01550	.01770
3.479	2.970	.02980	.02390	-.00230	.00080	-.00040	.26610	.21990	.01350	.01520	.01730
3.479	5.120	.12170	-.00610	-.00390	.00190	.00000	.26120	.21560	.01380	.01490	.01680
3.479	-.280	-.10110	.06590	-.00290	.00220	-.00020	.27660	.22900	.01350	.01590	.01810
	GRADIENT	.04000	-.01216	-.00006	-.00003	-.00000	-.00288	-.00245	.00001	-.00024	-.00021

RUN NO. 86/ 1 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.420	-.29990	.12620	.00710	-.00090	.00060	.26450	.24290	.00570	.00790	.00780
4.959	-3.360	-.22370	.10290	.00370	.00020	.00070	.25600	.23360	.00610	.00810	.00810
4.959	-2.320	-.18710	.09150	.01950	-.00670	.00070	.25100	.22840	.00620	.00810	.00820
4.959	-1.290	-.14760	.07980	.00310	-.00060	.00040	.24620	.22390	.00610	.00800	.00800
4.959	-.260	-.10960	.06880	.00300	.00000	.00050	.24290	.22070	.00610	.00790	.00810
4.959	.770	-.07450	.05950	.00270	.00000	.00030	.23820	.21610	.00620	.00780	.00810
4.959	1.800	-.03920	.04970	.00080	-.00010	.00020	.23540	.21340	.00630	.00760	.00790
4.959	2.850	.00160	.03750	.00050	-.00030	.00000	.23710	.21510	.00640	.00760	.00790
4.959	4.900	.07770	.01440	-.00010	-.00200	.00020	.22660	.20470	.00660	.00760	.00760
4.959	-.260	-.10970	.06880	.00150	.00000	-.00090	.24250	.22040	.00640	.00770	.00780
	GRADIENT	.03634	-.01054	-.00129	.00015	-.00006	-.00331	-.00323	.00006	-.00007	-.00006

MSFC TWT 600 (FA14) 01T1S1A1R1K1P1S14 (R1L028) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

ORIGINAL PAGE IS OF POOR QUALITY

RUN NO. 66/ 0 RN/L = 5.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.601	-5.650	-.42420	.16350	.00330	-.00250	.00260	.27600	.12540	.03490	.05640	.05920
.601	-3.510	-.30890	.11710	.00280	-.00120	.00210	.27400	.12960	.03430	.05550	.05450
.601	-2.470	-.25130	.09680	.00270	-.00100	.00250	.27390	.12750	.03460	.05580	.05590
.601	-1.390	-.18770	.07560	.00260	-.00080	.00240	.27110	.12500	.03430	.05630	.05540
.601	-.330	-.13320	.05660	-.00660	.00320	.00210	.26860	.12500	.03370	.05380	.05590
.601	.730	-.07560	.03760	-.00590	.00210	.00190	.26620	.12380	.03330	.05410	.05480
.601	1.800	-.01970	.01960	-.00710	.00330	.00260	.26420	.12460	.03260	.05300	.05390
.601	2.890	.04660	-.00170	-.01050	.00440	.00220	.26250	.11850	.03300	.05520	.05570
.601	5.020	.16800	-.04130	-.00980	.00440	.00280	.25390	.11070	.03260	.05520	.05520
.601	-.330	-.13390	.05700	.00140	-.00040	.00240	.26970	.12620	.03320	.05540	.05480
	GRADIENT	.05499	-.01838	-.00228	.00095	-.00001	-.00197	-.00135	-.00030	-.00029	-.00003

RUN NO. 65/ 0 RN/L = 6.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.903	-5.990	-.44160	.16550	-.01300	.00760	-.00010	.32370	.14800	.04020	06230	.07300
.903	-3.730	-.28920	.10370	-.01520	.01010	-.00030	.31920	.14650	.03870	06060	.07120
.903	-2.620	-.22390	.07690	-.01920	.01200	-.00050	.31830	.14810	.03820	.06130	.07050
.903	-1.510	-.14940	.04140	-.02050	.01190	-.00070	.31820	.14550	.03870	.06140	.07240
.903	-.390	-.07870	.01150	-.01840	.01050	-.00050	.31790	.14870	.03770	.06050	.07090
.903	.720	-.00730	-.01780	-.02120	.01160	-.00090	.31350	.14370	.03850	.06050	.07060
.903	1.840	.06170	-.04600	-.01630	.00920	-.00090	.31100	.14490	.03720	.05980	.06890
.903	2.960	.11860	-.06710	-.01460	.00720	-.00130	.30490	.14130	.03640	05960	.06740
.903	5.200	.23580	-.09970	-.01700	.00710	-.00080	.30350	.14200	.03540	.06290	.06300
.903	-.390	-.07730	.01120	-.01900	.01120	-.00050	.31690	.14930	.03750	.05930	.07060
	GRADIENT	.06203	-.02618	.00022	-.00047	-.00013	-.00199	-.00095	-.00029	-.00022	-.00053

RUN NO. 64/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.200	-6.190	-.47360	.19000	-.00140	-.00050	.00040	.47750	.27790	.04750	.07260	.07930
1.200	-3.780	-.29190	.11600	-.00710	.00270	-.00010	.47470	.28040	.04660	.07060	.07690
1.200	-2.630	-.21060	.08380	-.00960	.00500	-.00030	.47310	.28280	.04570	.06910	.07520
1.200	-1.450	-.13030	.05220	-.01090	.00560	-.00040	.47220	.28310	.04580	06830	.07480
1.200	-.280	-.05390	.02230	-.01230	.00600	-.00070	.47090	28320	.04600	.06780	.07370
1.200	.880	.02440	-.00820	-.01220	.00580	-.00060	.46970	.28230	.04630	.06720	.07380
1.200	2.040	.09410	-.03490	-.01210	.00580	-.00030	.46660	.27940	.04640	.06740	07320
1.200	3.190	.16290	-.06610	-.01240	.00450	-.00050	.46680	.27690	.04730	06900	.07350
1.200	5.510	.31380	-.12500	-.01200	.00220	-.00060	.46510	.27100	.04900	.07240	.07250
1.200	-.270	-.04800	.01990	-.01220	.00620	-.00060	.47170	.28390	.04610	.06730	.07420
	GRADIENT.	06535	-.02591	-.00068	.00022	-.00004	-.00120	-.00055	.00012	-.00029	-.00047

MSFC TWT 600 (FA14) 01T1S1A1R1K1P5I4 (RIL028) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 67/ 1 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.720	-.33000	.13760	-.00020	-.00090	-.00020	.30110	.25460	.01230	.01660	.01750
3.479	-3.550	-.23560	.10680	-.00240	.00090	-.00030	.29140	.24570	.01250	.01620	.01690
3.479	-2.460	-.18970	.09240	-.00250	.00150	.00010	.28760	.24230	.01240	.01600	.01670
3.479	-1.370	-.14520	.07900	-.00270	.00190	-.00010	.28420	.23960	.01240	.01580	.01630
3.479	-.290	-.10330	.06720	-.00240	.00130	-.00020	.28090	.23680	.01240	.01540	.01620
3.479	.780	-.06400	.05620	-.00150	.00090	.00060	.27800	.23380	.01260	.01510	.01640
3.479	1.860	-.02090	.04240	-.00230	.00110	.00000	.27500	.23090	.01270	.01490	.01630
3.479	2.970	.02750	.02540	-.00370	.00140	-.00020	.27160	.22820	.01280	.01450	.01600
3.479	5.110	.11680	-.00490	-.00660	.00230	.00000	.26570	.22310	.01300	.01400	.01540
3.479	-.290	-.10460	.06750	-.00240	.00160	-.00010	.28180	.23780	.01240	.01540	.01610
	GRADIENT	.03981	-.01209	-.00008	-.00001	.00003	-.00299	-.00267	.00006	-.00026	-.00011

RUN NO. 68/ 1 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-5.420	-.29370	.12250	.00280	.00070	.00030	.27110	.25040	.00550	.00780	.00730
4.959	-3.350	-.21760	.09940	.00220	.00000	.00050	.25980	.23840	.00570	.00790	.00760
4.959	-2.320	-.18250	.08850	.00200	-.00060	.00000	.25530	.23410	.00570	.00800	.00730
4.959	-1.290	-.14480	.07760	.00310	-.00140	.00010	.25020	.22900	.00580	.00790	.00740
4.959	-.260	-.10930	.06820	.00000	.00000	.00000	.24540	.22400	.00580	.00790	.00750
4.959	.770	-.07030	.05730	-.01080	.00270	.00000	.24230	.22130	.00580	.00760	.00740
4.959	1.800	-.03610	.04950	-.00070	.00020	.00000	.23860	.21760	.00590	.00750	.00760
4.959	2.860	.00490	.03730	-.00240	.00090	.00010	.23790	.21660	.00610	.00750	.00750
4.959	4.900	.07810	.01420	-.00300	-.00030	.00010	.23110	.21020	.00610	.00750	00710
4.959	-.260	-.12100	.07350	.00130	-.00040	.00060	.24690	.22570	.00600	.00760	.00740
	GRADIENT	.03605	-.01018	- 00084	.00012	-.00003	-.00343	-.00339	.00005	-.00007	-.00003

MSFC THT 600 (FA14) 02T1S1A1R1K1 (R1L029) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

ORIGINAL PAGE IS OF POOR QUALITY

RUN NO. 123/ 2 RN/L = 4.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.589	-5.160	-.40900	.15160	.02730	-.01330	.00300	.24980	.13140	.02440	.05210	.04180
.589	-3.040	-.27770	.09990	.03180	-.01510	.00240	.24740	.12940	.02430	.05040	.04310
.589	-1.990	-.21960	.07740	-.00120	-.00380	.00240	.24670	.13060	.02400	.04990	.04200
.589	-.930	-.15220	.04300	.04870	-.02170	.00170	.24650	.13310	.02370	.04930	.04220
.589	.190	-.06480	.03170	-.04930	.02530	.00270	.24330	.12930	.02350	.04840	.04190
.589	1.200	-.05240	.02340	-.04550	.01240	.00210	.24040	.12550	.02380	.04770	.04320
.589	2.290	.03620	-.00940	-.04240	.01740	.00240	.23970	.12750	.02340	.04680	.04190
.589	3.340	.07700	-.02300	-.02600	.00760	.00210	.23460	.12340	.02300	.04620	.04180
.589	5.480	.19940	-.06250	-.01330	.01330	.00310	.23190	.11810	.02330	.04790	.04250
.589	.100	-.11540	.03280	-.00020	-.00160	.00180	.24300	.13330	.02270	.04670	.04010
	GRADIENT	.05621	-.01884	-.01179	.00488	-.00002	-.00203	-.00107	-.00017	-.00068	-.00010

RUN NO. 124/ 3 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.901	-5.520	-.42020	.15300	-.00110	-.00200	.00100	.28670	.13400	.03140	.05960	.06150
.901	-3.280	-.28250	.09560	-.00950	.00650	.00110	.28400	.13890	.03030	.05650	.05820
.901	-2.210	-.21200	.05450	.00530	.00600	.00120	.28640	.14400	.03040	.05580	.05610
.901	-1.060	-.14940	.04670	.03090	-.00770	.00040	.28360	.14200	.03060	.05510	.05580
.901	.060	-.07490	.00950	-.01080	.00490	-.00030	.28240	.14320	.03010	.05420	.05480
.901	1.170	.01490	-.03760	.00210	.00160	-.00020	.28330	.14620	.02940	.05360	.05400
.901	2.310	.08670	-.06280	-.04380	.01610	-.00080	.28810	.14560	.03190	.05570	.05470
.901	3.410	.12700	-.07110	-.01750	.01150	-.00100	.28570	.14330	.03060	.05520	.05650
.901	5.620	.23450	-.10840	-.02570	.01200	-.00120	.28910	.14100	.03270	.05960	.05560
.901	.050	-.07240	.00630	-.01210	.00730	-.00010	.28880	.14650	.03180	.05610	.05420
	GRADIENT	.06351	-.02612	-.00484	.00142	-.00035	.00026	.00065	.00009	-.00018	-.00031

RUN NO. 125/ 2 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.202	-5.730	-.45990	.17440	-.01160	.00140	.00120	.43490	.25700	.04270	.06960	.06550
1.202	-3.280	-.23790	.08400	-.00290	.00160	.00100	.43640	.26580	.04120	.06630	.06300
1.202	-2.210	-.20010	.06650	-.01910	.00350	.00060	.43550	.26560	.04060	.06570	.06340
1.202	-1.050	-.11820	.03350	.01030	-.01290	-.00020	.43600	.26640	.04000	.06520	.06420
1.202	.050	-.06570	.00600	.00220	.00320	.00090	.43910	.26900	.04040	.06510	.06450
1.202	1.400	.07360	-.03870	-.02870	.00950	.00100	.43770	.27160	.03970	.06280	.06350
1.202	2.410	.11630	-.07300	-.04230	.02460	.00180	.43680	.27280	.04040	.06230	.06320
1.202	3.620	.17360	-.07730	-.01980	.00910	.00060	.43310	.26510	.04150	.06310	.06330
1.202	5.880	.30660	-.13800	.01110	-.00900	-.00060	.43490	.26640	.04200	.06390	.06240
1.202	.130	-.03630	-.00010	.00740	-.00360	.00110	.44020	.27220	.04010	.06400	.06370
	GRADIENT	.06374	-.02580	-.00425	.00270	.00007	-.00005	.00054	.00001	-.00058	-.00001

MSFC TWT 600 (FA14) 02T1S1A1R1K1 (R1L029) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 176/ 0 RN/L = 7.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.981	-5.840	-.43230	.15710	-.00520	.00570	.00160	.40520	.30410	.02540	.03250	.04310
1.981	-3.430	-.27680	.10200	-.01070	.00300	.00110	.39480	.29570	.02530	.03140	.04230
1.981	-2.230	-.20710	.08060	-.01330	.00930	.00170	.39430	.29490	.02570	.03200	.04160
1.981	-1.080	-.14370	.05480	-.01540	.00710	.00150	.39430	.29510	.02600	.03260	.04040
1.981	.090	-.07700	.03330	-.00530	.00130	.00130	.39290	.29560	.02650	.03260	.03800
1.981	1.270	-.01390	.00980	.00060	.00130	.00130	.39280	.29550	.02770	.03290	.03650
1.981	2.500	.06670	-.01300	-.00360	.00340	.00150	.39310	.29610	.02860	.03300	.03530
1.981	3.670	.14150	-.04540	-.00820	.00190	.00140	.39770	.30150	.02910	.03340	.03370
1.981	6.000	.28740	-.10790	-.03120	.01730	.00200	.39770	.30140	.02870	.03440	.03320
1.981	.100	-.07920	.03620	-.00580	.00210	.00140	.38610	.28970	.02650	.03230	.03740
	GRADIENT	.05837	-.02037	.00130	-.00063	.00001	.00015	.00061	.00057	.00025	-.00128

RUN NO. 177/ 1 RN/L = 7.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.270	-.32770	.13480	-.01350	.00650	.00080	.29530	.24950	.01220	.01550	.01790
3.479	-3.090	-.23010	.10240	-.00710	.00070	.00040	.28470	.24000	.01230	.01530	.01700
3.479	-1.980	-.18260	.08620	.00350	-.00550	.00010	.28140	.23670	.01250	.01520	.01690
3.479	-.910	-.13370	.07070	-.00080	-.00130	.00050	.27950	.23470	.01270	.01510	.01690
3.479	.160	-.09440	.05940	-.00110	-.00110	.00050	.27590	.23170	.01290	.01490	.01640
3.479	1.250	-.05260	.04900	.01500	-.01030	.00000	.27240	.22830	.01290	.01470	.01640
3.479	2.320	-.01150	.03410	-.00590	.00210	.00040	.27010	.22610	.01300	.01450	.01630
3.479	3.410	.03410	.01910	-.01870	.01030	.00090	.26740	.22390	.01310	.01420	.01610
3.479	5.600	.14120	-.01730	-.01410	.00610	.00040	.26030	.21770	.01310	.01380	.01570
3.479	.190	-.08160	.05580	-.01270	.00550	.00090	.27540	.23140	.01300	.01450	.01640
	GRADIENT	.04018	-.01242	-.00124	.00115	.00005	-.00270	-.00251	.00012	-.00017	-.00015

RUN NO. 178/ 0 RN/L = 5.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-4.940	-.27130	.11520	-.02130	.00620	.00110	.25210	.23540	.00540	00320	.00790
4.959	-2.850	-.16600	.07980	.01300	-.01040	.00040	24200	.22490	.00550	.00320	.00820
4.959	-1.860	-.17170	.08290	-.02260	.01020	00140	.23970	.22230	.00560	.00330	.00840
4.959	-.820	-.13660	.07390	.01150	- 00770	.00060	.23440	.21700	.00570	.00330	.00830
4.959	.200	-.10110	.06460	.00760	-.01030	.00020	.22880	.21160	.00580	.00320	.00810
4.959	1.230	-.07520	.05140	.14260	-.06560	-.00150	.22830	.21090	.00590	.00340	.00800
4.959	2.270	-.05160	.05420	.00790	-.00440	00030	.22330	.20530	.00620	.00320	.00850
4.959	3.320	.01180	.03160	-.01490	.00820	.00080	.21480	.19780	.00610	.00230	.00840
4.959	5.340	.06800	.00930	.01380	-.01600	-.00040	.21570	.19810	.00610	.00320	.00810
4.959	.220	-.10060	.06450	.03380	-.02180	-.00010	.22880	.21090	.00610	.00320	.00830
	GRADIENT	.03099	-.00886	.00565	-.00210	-.00013	-.00421	-.00429	.00010	-.00006	.00004

DATE 05 JAN 76 TABULATED SOURCE DATA, MSFC TWT 600 (FA14)

MSFC TWT 600 (FA14) 02T1S1A1R1K1F19 (R1L030) (

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC
PHI-S = 90.000 Z

RUN NO. 159/ 0 RN/L = 5.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS
.603	-5.200	-.42200	.15910	-.01670	.00450	.00300	.24790	.13270	.02350	.051
.603	-3.080	-.29990	.11000	.02390	-.00810	.00250	.24610	.13010	.02390	.050
.603	-1.960	-.21130	.08540	-.01220	.00790	.00270	.24330	.12830	.02360	.050
.603	-.890	-.14230	.05660	.02410	-.01100	.00170	.24210	.13020	.02310	.049
.603	.100	-.12960	.04520	.01520	-.00910	.00180	.24260	.12900	.02310	.049
.603	1.190	-.04480	.01160	.02640	-.00200	.00330	.24450	.13260	.02310	.049
.603	2.280	.02090	-.00120	-.02090	.00090	.00200	.23650	.12360	.02320	.048
.603	3.330	.05790	-.01360	.00090	.00210	.00260	.23520	.12340	.02270	.048
.603	5.460	.17240	-.05200	-.02360	.00700	.00230	.22720	.11540	.02230	.048
.603	.140	-.09810	.03740	.03520	-.01060	.00200	.24020	.12890	.02260	.048
	GRADIENT	.05497	-.01978	-.00287	.00087	.00002	-.00148	-.00091	-.00015	-.000

RUN NO. 160/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS
.903	-5.440	-.39320	.14390	.00110	.00430	.00160	.28610	.13400	.03220	.060
.903	-3.230	-.25380	.08610	-.04480	.02050	.00140	.28240	.13700	.03100	.056
.903	-2.130	-.18680	.05260	-.05360	.01480	.00070	.28110	.13800	.03050	.056
.903	-1.040	-.12920	.02770	-.01140	.00130	.00030	.28190	.13830	.03120	.056
.903	.040	-.08170	.01260	-.01070	.00580	.00000	.27880	.14080	.02900	.053
.903	1.240	.02590	-.02920	-.03970	.01660	.00050	.27860	.14090	.02970	.053
.903	2.330	.09720	-.06730	-.02650	.01200	-.00030	.28150	.14460	.02900	.053
.903	3.450	.13460	-.06800	-.01920	.00940	-.00110	.27930	.13880	.03070	.055
.903	5.630	.24540	-.11600	.00610	.00630	-.00110	.28870	.14180	.03200	.058
.903	.070	-.05050	-.00590	-.02690	.00650	-.00030	.28780	.14860	.02930	.054
	GRADIENT	.06050	-.02431	.00323	-.00073	-.00030	-.00039	.00068	-.00017	-.000

RUN NO. 161/ 0 RN/L = 7.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS
1.206	-5.820	-.47980	.17590	-.03960	.01530	.00180	.43940	.26080	.04350	.069
1.206	-3.450	-.30330	.10680	-.01420	.00850	.00140	.44050	.26750	.04240	.066
1.206	-2.200	-.20330	.07040	-.01510	.00350	.00080	.43860	.26780	.04240	.065
1.206	-.960	-.09520	.02930	-.01680	.00810	.00110	.43980	.26900	.04210	.064
1.206	.050	-.06360	.00820	.01140	-.00200	.00080	.43980	.26950	.04190	.064
1.206	1.260	.00880	-.01330	-.01250	.00390	.00060	.43660	.26720	.04200	.063
1.206	2.390	.09180	-.05600	-.00460	.00730	.00100	.43740	.26980	.04220	.061
1.206	3.510	.14460	-.07740	-.02130	.01200	.00070	.43570	.27040	.04180	.061
1.206	5.820	.28910	-.13630	.05660	-.02950	-.00150	.43630	.26610	.04370	.064
1.206	.120	-.04680	.00590	-.00700	-.00200	.00020	.43650	.27030	.04130	.062
	GRADIENT	.06327	-.02630	.00010	.00043	-.00007	-.00059	.00034	-.00007	-.000

MSFC TWT 600 (FA14) 02TIS1A1R1K1F20 (RIL031) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN, XT
LREF = 1290.0000 IN. YMRP = .0000 IN, YT
BREF = 1290.0000 IN. ZMRP = .0000 IN, ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORGINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 164/ 0 RN/L = 5.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.603	-5.150	-.35080	.11940	.01400	.00530	.00190	.27090	.15110	.02740	.05240	.03980
.603	-3.070	-.30230	.11500	.01240	-.00950	.00030	.25760	.13970	.02670	.05120	.03970
.603	-1.950	-.19350	.07330	-.03490	.01300	.00110	.25830	.14220	.02570	.05050	.03970
.603	-.890	-.14570	.05960	.00460	-.00310	.00000	.25500	.14020	.02540	.05060	.03870
.603	.150	-.09030	.03360	-.02610	.01260	.00060	.25640	.13960	.02600	.05140	.03930
.603	1.250	-.00600	.00690	-.00620	.00310	.00020	.25420	.13740	.02590	.05040	.04030
.603	2.280	.00780	.00630	-.02430	.02120	.00180	.25000	.13600	.02550	.04970	.03860
.603	3.370	.09040	-.02410	-.00830	.00590	.00080	.24670	.13070	.02570	.05030	.03990
.603	5.470	.17880	-.05270	-.02660	.01730	.00180	.23770	.12260	.02520	.05000	.03980
.603	.180	-.06900	.02830	-.03830	.02030	.00120	.25620	.13810	.02620	.05110	.04080
	GRADIENT	.05757	-.02021	-.00174	.00230	.00010	-.00167	-.00141	-.00010	-.00015	.00000

RUN NO. 163/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.901	-5.470	-.41170	.15280	-.04340	.01420	.00080	.29930	.14050	.03480	.05920	.06460
.901	-3.220	-.26690	.09790	.00470	-.00020	.00070	.29960	.14400	.03490	.05870	.06180
.901	-2.150	-.21220	.07140	-.03570	.01280	.00070	.29610	.14630	.03310	.05670	.05980
.901	-1.080	-.16700	.04980	.01710	-.00230	.00010	.29600	.14480	.03390	.05710	.06000
.901	.080	-.06740	.00790	-.01060	00330	-.00030	.29390	.14560	.03330	.05640	.05850
.901	1.170	-.01740	-.01040	.01690	.00150	.00000	.28970	.14520	.03220	.05550	.05670
.901	2.240	.06770	-.06620	-.02450	.01650	-.00020	.29090	.14940	.03160	.05510	.05480
.901	3.450	.14190	-.07340	-.00800	.00900	-.00100	.28620	.14400	03150	.05560	.05490
.901	5.690	.27110	-.12360	-.02880	.01730	-.00110	.29140	.14620	.03140	.05760	.05610
.901	.090	-.05470	.00210	.02160	.00010	.00000	.29770	15120	.03180	.05540	.05910
	GRADIENT	.06241	-.02734	-.00051	.00124	-.00023	-.00184	.00020	-.00048	-.00045	-.00109

RUN NO. 162/ 0 RN/L = 7.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.205	-5.790	-.49590	.19120	.00170	.01440	.00210	.46230	.26210	04800	.07080	.07130
1.205	-3.430	-.31000	.11180	-.04330	.02090	.00110	.44920	.26710	.04580	.06760	.06860
1.205	-2.240	-.21450	.07020	-.00320	-.00220	-.00020	.44750	.26840	.04510	.06630	.06760
1.205	-1.070	- 14180	.04420	-.01160	.01620	.00130	.44740	.27090	.04450	.06560	.06630
1.205	.090	-.06400	01480	-.01530	.00940	.00020	.44490	.26860	.04460	.06580	.06570
1.205	1.240	.01700	-.02370	-.02430	-.00140	-.00080	.44070	.26530	.04460	.06490	.06580
1.205	2.360	.08380	-.05800	-.04710	.04000	.00210	.44480	.27270	.04450	.06320	.06420
1.205	3.610	15950	-.07400	-.04940	.01740	-.00070	.43630	.26330	.04550	.06410	.06330
1.205	5.840	.29330	-.13700	-.05820	.03250	.00020	.44030	.26590	.04620	.06540	.06270
1.205	.040	-.07730	.01470	.01110	.00290	.00040	.44550	.26820	.04530	.06590	.06600
	GRADIENT	.06632	-.02700	-.00361	.00169	-.00009	-.00156	-.00027	-.00006	-.00053	-.00071

MSFC TWT 600 (FAIH) 02TIS1A1R1K1F21 (R1L032) (10 OCT 75)

ORIGINAL PAGE IS
OF POOR QUALITY

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 876.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 165/ 0 RN/L = 5.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.603	-5.150	-.38460	.14070	.00260	-.00570	.00060	.25850	.13770	.02610	.05110	.04350
.603	-3.110	-.34120	.12760	.02580	-.00930	.00090	.25410	.13060	02640	.05100	.04600
.603	-1.930	-.18520	.07670	- 03940	.01000	00100	.25250	.13160	02570	.05070	.04440
.603	-.940	-.17740	.06560	-.03540	.01580	00160	.25260	.13270	.02530	.05050	.04400
.603	.130	-.09980	.03360	.01620	.00290	.00220	.25420	.13550	.02560	.05090	.04200
.603	1.200	-.04490	.01750	.02030	-.00950	.00090	.24970	.13170	.02540	.04990	.04250
.603	2.230	-.02310	.01090	-.01570	.00420	.00160	.24620	.13030	.02500	.04930	.04150
.603	3.370	.08430	-.01830	.01840	-.00120	.00210	.24350	.12980	.02430	.04930	.03990
.603	5.500	.19270	-.05380	- 04030	.02350	.00280	.23640	.11990	.02560	.05030	.04050
.603	.140	-.11100	.04880	-.00100	.00330	.00150	.25160	.13390	.02540	.05070	.04130
	GRADIENT	.05817	-.02070	.00263	-.00040	.00014	- 00158	-.00020	-.00026	-.00028	-.00086

RUN NO. 166/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.902	-5.460	-.40560	.14840	-.00790	.01240	.00210	.29150	.14070	.03270	.05900	.05900
.902	-3.280	-.28790	.10040	.00280	.00080	.00090	.29350	.14570	.03290	.05750	.05730
.902	-2.160	-.21390	.07050	-.02230	.01460	.00150	.29330	.14770	.03170	.05720	.05660
.902	-1.060	- 13470	.02680	-.00410	.00390	.00110	.29390	.14990	.03160	.05630	.05600
.902	.040	-.08330	.01180	-.04660	.02320	.00100	.29220	.14460	.03290	.05790	.05650
.902	1.170	-.02820	-.00590	-.00580	.00890	.00080	.28700	.14500	.03080	.05530	.05570
.902	2.300	.08000	-.05980	- 03190	.01330	-.00020	.28650	.14620	03100	05570	.05350
.902	3.500	.15430	-.06900	-.04290	.01960	-.00060	.28050	.14070	.03050	05530	.05390
.902	5.620	22300	-.09610	-.00860	.00600	-.00100	28320	.14020	.03140	.05900	.05240
.902	.080	-.05150	-.00480	.00220	.00270	.00030	.29170	.15220	.03020	.05460	.05450
	GRADIENT	.06421	-.02543	-.00502	.00187	-.00026	-.00190	-.00073	-.00030	-.00034	-.00053

RUN NO. 167/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.203	-5 770	-.49300	.19900	-.00080	- 00580	.00140	.43560	.25510	.04400	.06900	.06740
1.203	-3.350	-.28110	.10600	00520	-.01780	-.00010	.43810	.26290	.04310	.06590	.06610
1.203	-2.200	-.21060	.07630	-.01780	.00860	.00150	.43960	.26590	.04280	.06490	.06590
1.203	-1.020	-.12840	.04500	.00660	.00700	.00180	.44080	.27580	.04290	.06460	.05740
1.203	.100	-.05560	.00820	.00520	.00260	.00130	.44200	.26950	.04290	.06460	.06490
1.203	1.240	.02090	-.02790	- 03260	.01630	.00170	.44180	.26950	.04350	06410	.06460
1.203	2.380	.09360	-.06220	-.01990	.01570	.00160	.44040	.27180	.04340	.06140	.06370
1.203	3.580	.16930	-.08390	-.03730	.03020	.00190	.43850	.26930	.04420	.06190	.06280
1.203	5 870	.31030	-.14450	- 01190	.01240	.00080	.43990	.26760	.04590	.06400	.06210
1.203	.080	-.06580	.01410	.01050	-.00180	.00120	.44230	.26950	.04360	.06420	.06480
	GRADIENT	.06547	-.02854	-.00530	.00521	.00019	.00012	.00077	.00016	-.00060	-.00023

MSFC TWT 600 (FAI4) 02T1S1A1R1K1F22 (RIL033) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALC = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 170/ 0 RN/L = 5.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.603	-5.160	-.41090	.16020	.09110	-.04000	.00200	.24510	.12880	.02430	.05080	.04110
.603	-3.030	-.26290	.10030	.01810	-.00190	.00330	.24470	.12960	.02380	.04930	.04180
.603	-2.000	-.2e630	.08300	-.02100	.00980	.00290	.24270	.12970	.02340	.04930	.04020
.603	-.910	-.15910	.06520	-.00080	-.00290	.00210	.24050	.12440	02360	.04950	.04280
.603	.160	-.08290	.03460	-.02390	.00780	.00210	.24090	.12850	.02300	.04850	.04070
.603	1.220	-.05410	.02660	-.00660	.00800	.00270	.24070	.12770	.02350	.04840	.04090
.603	2.240	-.01330	.00690	-.00740	.00790	.00240	.24010	.12480	.02340	.04810	.04360
.603	3.380	.09940	-.02360	-.01010	.00390	.00170	.23480	.12160	.02350	.04840	.04110
.603	5.450	.14790	-.03740	.01770	-.00310	.00210	.22620	.11340	.02300	.04880	.04090
.603	.150	-.09820	.04290	-.03450	.01660	.00180	.23950	.12950	.02240	.04760	.03990
	GRADIENT	.05429	-.01886	-.00210	.00081	- 00017	-.00117	-.00102	-.00003	-.00021	.00009

RUN NO. 169/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.903	-5.490	-.42600	.15910	-.02710	.01630	.00240	.29300	.13530	.03440	.06110	.06210
.903	-3.240	-.26950	.09660	-.00810	.00590	.00140	.28740	.14330	.03080	.05520	.05790
903	-2.170	-.21350	.06700	-.04250	.01330	.00090	.28570	.14070	.03160	.05660	.05670
.903	-1.100	-.15370	.03440	.00790	-.00460	.00040	.28610	.14520	.03030	.05410	.05630
.903	.050	-.06190	-.00330	-.00890	.00050	.00000	.28780	.14440	.03130	.05580	.05610
.903	1.170	.00440	-.02900	-.04710	.01980	.00090	.28530	.14430	.03090	.05540	.05450
.903	2 250	.06070	-.05830	.01460	-.00300	-.00070	.28500	.14990	.02910	.05330	.05250
.903	3.430	.11530	-.05390	-.00590	.00320	- 00150	.27780	.13940	.03020	.05530	.05280
903	5.770	28490	-.11850	-.02870	.01190	-.00110	.28790	.14290	.03100	.05830	.05560
.903	.060	- 06260	-.00440	- 00950	.00320	00000	.29380	.14810	.03160	.05620	.05780
	GRADIENT	.05980	-.02455	.00208	-.00050	-.00037	-.00100	.00017	-.00020	-.00016	-.00082

RUN NO. 168/ 0 RN/L = 7.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.203	-5.780	-.47320	.17570	.00150	-.00240	.00210	.45230	.26800	.04500	.06970	.06950
1.203	-3.340	- 27640	.10290	.00420	.00710	.00230	.45280	.27340	.04410	.06760	.06760
1.203	-2.240	-.20320	.06130	-.00040	-.00980	.00060	.45040	.27370	.04370	.06660	.06620
1.203	-1 070	- 14750	.04910	-.00020	.00510	.00160	.45040	.27420	.04360	.06590	.06650
1.203	.130	-.04640	.00780	.01240	-.00540	.00090	.44980	.27390	.04360	.06600	.06610
1.203	1.220	.00890	-.02240	.00130	.00410	.00160	.45150	.27690	.04380	.06500	.06560
1.203	2.380	10010	-.06690	.01620	-.00610	.00060	.45070	.27570	.04520	.06420	06540
1.203	3.580	.15630	-.07200	.00200	-.00110	.00030	.44470	.26950	.04570	.06430	.06500
1.203	5 810	.29170	-.14170	.01820	-.01730	-.00100	.44700	.26990	.04660	.06610	.06420
1.203	.170	-.04030	.01000	-.01920	-.00540	.00010	.44660	.27280	.04360	.06500	.06510
	GRADIENT	.06383	-.02638	.00088	-.00056	-.00019	-.00070	-.00016	.00025	-.00048	-.00032

MSFC THT 600 (FA14) 02T2S1A1R1K1 (R1L034) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 146/ 0 RN/L = 5.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.604	-5.170	-.41180	.16600	-.01410	-.00010	.00350	.24530	.12820	.02390	.05180	.04110
.604	-3.090	-.28960	.10160	.00000	-.00420	.00310	.24710	.13220	.02370	.04980	.04120
.604	-2.000	-.21290	.07000	-.01560	-.00120	.00260	.24620	.12950	.02390	.04980	.04280
.604	-.900	-.13560	.04510	.04390	-.02030	.00190	.24570	.13200	.02300	.04870	.04190
.604	.120	-.10400	.03410	.00530	.00240	.00280	.24420	.12970	.02320	.04850	.04260
.604	1.210	-.03690	.01740	-.01360	.00390	.00270	.23970	.12590	.02330	.04790	.04260
.604	2.280	.01790	.00040	-.01090	.00890	.00340	.23810	.12470	.02280	.04720	.04320
.604	3.350	.07570	-.01680	-.01630	.01140	.00330	.23540	.12340	.02290	.04740	.04160
.604	5.470	.17830	-.05520	.00390	.00220	.00330	.22820	.11810	.02240	.04770	.03980
.604	.140	-.09430	.03330	.00560	-.00070	.00240	.24490	.12800	.02390	.04920	.04350
	GRADIENT	.05525	-.01742	-.00319	.00302	.00010	-.00191	-.00140	-.00014	-.00044	.00009

RUN NO. 145/ 0 RN/L = 6.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.902	-5.500	-.43020	.16690	-.00690	.00370	.00110	.28590	.13130	.03200	.06030	.06230
.902	-3.260	-.27270	.09960	- 01240	.00810	00120	.28340	.13930	.03000	05610	.05780
.902	-2.230	-.22900	.06270	-.01030	.00580	.00090	.28320	14240	.02890	.055'0	.05660
.902	-.990	-.10810	.02320	- 01730	.00590	.00060	.28430	.14310	.03040	.05630	.05440
.902	.060	-.07370	.00910	.00070	-.00310	-.00040	.28160	.14030	.03060	.05620	.05430
.902	1.140	-.01150	-.02430	-.00590	.00570	.00010	.28250	.14130	.03130	.05600	.05370
.902	2.280	.07650	-.06380	-.00730	.00880	-.00010	.28640	14400	.03150	05540	.05540
902	3 390	12840	-.07330	- 01440	.00650	- 00160	.28120	.13800	.03130	05650	.05520
.902	5.680	.25560	-.11190	-.00160	.00210	-.00160	.28320	.14110	.02990	.05680	.05520
.902	.100	-.04900	-.00220	-.01660	.00770	-.00020	.28540	.14250	.03080	05600	.05600
	GRADIENT	.06153	-.02635	.00035	.00003	-.00035	-.00006	-.00008	.00032	.00005	-.00035

RUN NO. 144/ 0 RN/L = 7.35 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.204	-5.760	-.46490	.17600	.05190	-.03160	-.00020	.43220	.25330	.04320	.07010	.06560
1.204	-3.370	-.28750	.10590	-.03470	.02060	.00230	.43390	.25740	.04320	.06980	.06440
1.204	-2.170	-.19180	06580	- 05250	.04010	.00350	.43640	.26040	.04250	06830	.06510
1.204	-1.000	-.11580	.03880	.02190	-.03000	-.00110	.42770	.25360	.04150	.06660	.06580
1.204	.110	-.04730	.00310	03010	-.01830	00030	.43220	.26060	.04080	.06540	.06530
1.204	1.330	.05020	-.03300	-.00050	-.00180	.00070	.43140	.26220	.04050	.06400	.06440
1.204	2.440	11120	-.06160	-.01770	.01390	.00150	.43130	.26270	.04130	.06280	.06430
1.204	3.600	.17490	-.08240	.01100	-.00890	-.00040	.42700	.25930	.04120	06180	.06450
1.204	5.900	.32410	-.14970	.02990	-.01770	-.00070	.42860	.25780	.04300	.06380	.06390
1.204	.180	-.03030	.00480	.01440	-.01050	.00080	.43120	.25940	.04150	.06460	.06550
	GRADIENT	.06655	-.02748	.00568	-.00348	-.00032	-.00084	.00058	-.00029	-.00107	-.00008

MSFC THT 600 (FA14) 02T3S1A1R1K1 (R1L035) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 141/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.606	-5.210	-.41510	.15100	.04710	-.02420	.00290	.25280	.13350	.02430	.05220	.04270
.606	-3.050	-.23860	.07610	.03910	-.01940	.00270	.25330	.13550	.02430	.05060	.04270
.606	-1.930	-.17660	.07240	-.01060	-.00250	.00240	.24590	.12950	.02380	.04980	.04260
.606	-.910	-.13320	.03870	-.00940	.00230	.00290	.25100	.13270	.02430	.05020	.04360
.606	.120	-.10940	.03980	.00290	.00310	.00300	.24810	.13140	.02380	.04940	.04340
.606	1.220	-.02990	.01250	.00280	-.00890	.00190	.24470	.13170	.02290	.04780	.04220
.606	2.290	.02550	-.00390	.01560	-.00750	.00250	.24350	.13030	.02340	.04770	.04210
.606	3.330	.07450	-.01750	-.00810	.00740	.00350	.24120	.12730	.02300	.04760	.04310
.606	5.450	.16470	-.04920	-.01190	-.00100	.00310	.23160	.11760	.02290	.04850	.04260
.606	:140	-.09920	.03870	.02800	-.01320	.00240	.24750	.13260	.02350	.04860	.04260
	GRADIENT	.04873	- 01546	-.00262	.00199	.00005	-.00160	-.00081	- 00021	-.00053	-.00004

RUN NO. 142/ 0 RN/L = 6.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.904	-5.500	-.40640	.14610	.00260	-.00320	.00070	.29160	.13700	.03190	.06090	.06160
.904	-3.230	-.24430	.08340	-.02280	.00940	.00100	.28790	.13820	03200	.05920	.05840
.904	-2.180	-.19220	.04620	-.01060	.00270	.00090	.28950	.14540	.03070	.05730	.05590
.904	-1.000	-.10530	.01690	.01650	-.01080	.00010	.28860	.14370	.03120	.05730	.05620
.904	.090	-.05980	.00540	.00120	.00060	.00040	.28330	.14450	.02930	.05520	.05420
.904	1.190	.00960	-.02770	-.01640	.00280	-.00010	.28080	.14260	.02860	.05410	.05530
.904	2.320	.06900	-.04590	-.01880	.01040	.00010	.28100	.14060	.03020	.05540	.05470
.904	3.420	.14020	-.07960	.00100	-.00270	-.00120	.28030	.14130	.02970	05510	.05410
.904	5.730	.26810	-.10860	-.04570	.01190	-.00130	.28540	.13780	.03090	.05820	.05840
.904	.070	-.06100	.00000	- 00580	-.00230	-.00010	.29190	.14440	.03280	.05910	.05550
	GRADIENT	.05752	-.02304	.00072	-.00024	-.00027	-.00153	-.00005	-.00034	-.00062	-.00052

RUN NO. 143/ 0 RN/L = 7.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.204	-5.730	-.43890	.15930	.00560	-.00860	.00030	.43920	.25820	.04440	.07020	.06620
1.204	-3.380	-.25590	.08030	-.01080	.01210	.00190	.44300	.26690	.04350	.06800	.06440
1.204	-2.210	-.20140	.06540	.01270	-.00730	.00070	.43970	.26510	.04230	.06760	.06450
1.204	-1.010	-.10010	.02140	.00360	-.00840	.00030	.43990	.26660	.04100	.06670	.06550
1.204	.140	-.03660	.00140	.02990	-.01220	.00030	.44090	.26860	.04060	.06630	.06530
1.204	1.320	.05180	-.03560	-.00880	.00670	.00100	.44160	.27090	.04100	.06500	.06460
1.204	2.500	.13100	-.06770	-.03070	.01470	.00100	.43840	.27130	.04030	.06290	.06370
1.204	3.610	.17130	-.07830	- 01180	.01140	.00060	.43660	.26730	.04150	06360	.06410
1.204	5.930	.32410	-.14150	-.04830	.03600	.00180	.43950	.26780	.04290	.06540	.06330
1.204	.130	-.03420	-.00170	.02660	-.01690	.00010	.43890	.26920	.04070	.06490	.06400
	GRADIENT	.06416	-.02444	-.00313	.00174	-.00008	-.00061	.00055	-.00031	-.00074	-.00010

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OF POOR QUALITY

MSFC THT 600 (FA14) 02TIS2AIRIK1 (R1L036) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 147/ 0 RN/L = 5.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.603	-5.150	-.39340	.15810	-.09850	.03030	.00390	.24510	.12360	.02500	.05270	.04370
.603	-3.050	-.27790	.11300	.00310	-.00290	00300	.24440	.12560	.02460	.05090	.04310
.603	-1.970	-.20570	.07740	.02280	-.00700	.00290	.24790	.12810	.02460	.05110	.04390
.603	-.920	-.15750	.05780	-.01750	.00450	.00250	.24440	.12510	.02470	.05100	.04340
.603	.180	-.06270	.02570	-.04640	.01510	.00250	.24410	.12730	02430	.05020	.04220
.603	1.170	-.07070	.02750	-.00710	.00300	.00270	.24480	.12680	.02430	.05000	.04360
.603	2.300	.03960	-.01060	-.02680	.01060	.00300	.24280	.12740	.02370	.04870	.04280
.603	3.390	.10130	-.02470	-.02770	.00930	.00330	.23610	.12660	.02210	.04690	.04040
.603	5.490	.19770	-.06090	-.02690	.01480	.00360	.23180	.11720	.02350	.04920	.04170
.603	.090	-.14680	.05700	.00190	-.00080	.00270	.24450	.12730	.02400	.04990	.04320
	GRADIENT	.05736	-.02071	-.00608	.00236	.00004	-.00116	.00011	-.00033	-.00060	-.00034

RUN NO. 148/ 0 RN/L = 6.83 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.902	-5.490	-.40610	.14710	-.01760	.00770	.00120	.28500	.12990	.03240	.06140	.06110
.902	-3.280	-.26320	.08410	-.01650	.00890	.00100	.28150	.13300	.03200	.05880	.05750
.902	-2.130	-.19150	.05890	-.00340	.00630	.00100	.28410	.13900	.03190	.05750	.05660
.902	-1.040	-.12390	.02230	-.00750	.00630	.00060	.28360	.13770	.03150	.05620	.05810
.902	.050	-.07870	.01000	-.00160	.00100	-.00060	.28040	.13820	.03150	.05660	.05400
.902	1.150	-.01540	-.01770	-.01500	.01220	.00020	.27880	.13720	.03070	.05670	.05410
.902	2.260	.06820	-.06170	.00210	-.00450	-.00130	.28180	.14180	.02990	.05590	.05400
.902	3.490	.15610	-.07590	.00480	-.00220	-.00200	.27690	.13590	.02930	.05470	.05690
.902	5.670	.24790	-.10700	-.03810	.01790	-.00140	.28120	.13560	.03050	.05950	.05540
.902	.090	-.05180	-.00150	-.02530	.01240	-.00010	.28640	.14350	.03090	.05570	.05620
	GRADIENT	.06025	-.02432	.00217	-.00157	-.00045	-.00074	.00043	-.00041	-.00048	-.00028

RUN NO. 149/ 0 RN/L = 7.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.203	-5.780	-.44370	.15470	.01170	-.00990	.00090	.42060	.24320	.04330	.06920	.06470
1.203	-3.440	-.28130	.08990	.00110	-.00120	.00100	.42000	.24700	.04220	.06740	.06320
1.203	-2.210	-.19810	.06370	.01050	-.01410	-.00010	.41640	.24650	.04130	.06580	.06270
1.203	-1.040	-.11700	.03070	.00080	-.00220	.00050	.41790	.24880	.04070	.06440	.06380
1.203	.170	-.01960	-.00630	-.01770	.01090	.00110	.41870	.25120	.04010	.06330	.06390
1.203	1.280	.02150	-.01950	-.01930	.01460	.00140	.41780	.25210	.04040	.06190	.06320
1.203	2.520	.12640	-.05710	-.01490	.00110	.00000	.41480	.25000	.04060	.06060	.06350
1.203	3.630	.17340	-.08020	-.01180	.01060	.00060	.41810	.25030	.04140	.06130	.06290
1.203	6.020	.36000	-.15460	-.03260	.02920	.00180	.42220	.25490	.04230	.06340	.06150
1.203	.180	-.02630	.00040	.00240	-.00300	.00050	.41790	.25180	.04100	.06220	.06290
	GRADIENT	.06528	-.02433	-.00332	.00249	-.00000	-.00046	00061	-.00013	-.00095	.00000

MSFC THT 600 (FA14) 02T1S3AIRIK1 (R1L037) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z . = .140

RUN NO. 152/ 0 RN/L = 5.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.600	-5.150	-.38550	.15160	.00360	-.00070	.00350	.24480	.12370	.02460	.05240	.04400
.600	-3.040	-.25550	.09670	.01300	-.00730	.00280	.24500	.12910	.02360	.05070	.04150
.600	-1.940	-.17330	.06330	-.01210	-.00160	.00230	.24390	.12870	.02360	.05030	.04120
.600	-.880	-.12770	.04780	.03010	-.01110	.00220	.24400	.12830	.02360	.05010	.04190
.600	.140	-.08480	.02310	-.03530	.01310	.00250	.24440	.13040	.02340	.04970	.04070
.600	1.200	-.04220	.01690	-.02390	.00710	.00250	.23950	.12640	.02270	.04820	.04210
.600	2.340	.06510	-.01440	.01320	-.00830	.00240	.23770	.12510	.02310	.04850	.04090
.600	3.370	.09160	-.02220	.01740	-.00210	.00280	.23570	.12040	.02320	.04830	.04360
.600	5.500	.19880	-.05820	.06190	-.02960	.00180	.22530	.11160	.02300	.04880	.04180
.600	.130	-.10180	.03340	-.00570	.00830	.00320	.24430	.12860	.02370	.04990	.04190
	GRADIENT	.05376	-.01819	.00041	.00065	.00002	-.00150	-.00118	-.00010	-.00042	.00020

RUN NO. 151/ 0 RN/L = 6.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.903	-5.580	-.42950	.14360	.00260	.00220	.00160	.28170	.12920	.03150	.06020	.06070
.903	-3.330	-.29440	.09500	-.01720	-.00010	.00040	.27200	.12930	.03080	.05680	.05480
.903	-2.190	-.20750	.05630	.01040	-.00070	.00090	.27420	.13270	.03030	.05510	.05580
.903	-1.000	-.10380	.01640	-.01090	-.00170	.00000	.27110	.13060	.03030	.05440	.05570
.903	.030	-.07970	.00460	.00750	-.00500	-.00060	.27260	.12910	.03220	.05660	.05460
.903	1.170	.00360	-.02710	-.02160	.01320	-.00050	.26940	.13250	.02890	.05330	.05450
.903	2.320	.08620	-.05950	-.00280	.00090	-.00100	.27210	.13240	.03010	.05470	.05470
.903	3.440	.14260	-.07780	-.01680	.00760	-.00130	.27000	.13190	.03020	.05540	.05240
.903	5.670	.22300	-.08520	-.01080	.00100	-.00200	.26560	.12960	.02740	.05550	.05300
.903	.080	-.05160	-.00490	-.01300	.00710	-.00010	.27390	.13290	.03110	.05460	.05530
	GRADIENT	.06375	-.02522	-.00115	.00130	-.00030	-.00038	.00029	-.00012	-.00020	-.00033

RUN NO. 150/ 0 RN/L = 7.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.206	-5.790	-.45340	.16000	.01230	-.00530	.00120	.43540	.25520	.04420	.07000	.06590
1.206	-3.430	-.28490	.09540	-.02470	.01520	.00180	.43380	.25930	.04270	.06720	.06450
1.206	-2.180	-.19270	.06490	.04040	-.01870	.00020	.43130	.26020	.04170	.06570	.06340
1.206	-1.020	-.11360	.03100	.03450	-.01270	.00060	.43180	.26180	.04110	.06460	.06410
1.206	.120	-.04560	.00420	-.01070	.00650	.00130	.43060	.26250	.04060	.06360	.06380
1.206	1.330	.03960	-.02270	-.01170	-.00010	.00050	.42700	.25990	.04050	.06250	.06400
1.206	2.440	.10130	-.05300	-.02610	.01930	.00170	.42740	.26150	.04050	.06160	.06360
1.206	3.720	.18460	-.07310	.00310	.00050	.00030	.42310	.25790	.04070	.06130	.06290
1.206	5.960	.33180	-.14330	-.02420	.01180	.00080	.42640	.25970	.04120	.06330	.06200
1.206	.090	-.05760	.00860	.02670	-.01470	.00040	.42780	.26000	.04080	.06280	.06390
	GRADIENT	.06508	-.02405	-.00277	.00128	-.00005	-.00136	-.00011	-.00027	-.00085	-.00014

MSFC TWT 600 (FA14) 02TIS4AIRIK1 (RIL038) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 153/ 1 RN/L = 5.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.602	-5.150	-.38070	.14790	.02410	-.00990	.00300	.24810	.12890	.02410	.05170	.04320
.602	-3.070	-.28290	.10860	-.03550	.00470	.00240	.24130	.12750	.02320	.04940	.04100
.602	-1.960	-.21270	.08480	.02420	-.00990	.00230	.24460	.13080	.02300	.04910	.04150
.602	-.920	-.15040	.05100	.03590	-.01790	.00150	.24500	.13160	.02340	.04940	.04030
.602	.140	-.08180	.02280	-.01890	.00610	.00220	.24470	.13090	.02320	.04880	.04150
.602	1.210	-.03100	.01100	.00950	.00350	.00290	.24380	.13200	.02270	.04800	.04090
.602	2.300	.04310	-.01160	.00740	-.00660	.00170	.24110	.13180	.02210	.04670	.04030
.602	3.360	.08430	-.02350	.02950	-.01670	.00140	.23550	.12520	.02230	.04710	.04080
.602	5.510	.22630	-.07830	.00590	-.00200	.00210	.23070	.12070	.02190	.04740	.04050
.602	.140	-.08940	.03040	-.00260	.00740	.00260	.24630	.13240	.02300	.04850	.04130
	GRADIENT	.05787	-.02100	.00455	-.00122	-.00009	-.00085	-.00016	-.00017	-.00044	-.00008

RUN NO. 154/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.907	-5.540	-.40290	.13880	-.02620	.00900	.00120	.31860	.14240	.04230	.07270	.06100
.907	-3.260	-.26800	.09130	-.01340	.00630	.00140	.27040	.12940	.02720	.05380	.05980
.907	-2.170	-.19510	.05100	.01600	-.00170	.00130	.28120	.13790	.03100	.05640	.05570
.907	-1.020	-.11970	.02530	-.01550	-.00460	.00010	.27800	.13550	.03080	.05550	.05600
.907	.090	-.05170	-.00310	-.02770	.00610	.00010	.27930	.13550	.03150	.05620	.05600
.907	1.190	-.00170	-.01850	-.03120	.01340	.00040	.27680	.13600	.03070	.05590	.05410
.907	2.320	.07590	-.05070	-.02730	.01680	.00050	.27460	.13550	.02970	.05520	.05400
.907	3.390	.11320	-.06520	-.02610	.00370	-.00110	.27380	.13410	.03030	.05580	.05340
.907	5.720	.24610	-.09120	-.02550	.01080	-.00100	.27660	.13020	.03120	.05890	.05620
.907	.090	-.05080	-.00160	.00190	-.00090	.00030	.28180	.13550	.03240	.05710	.05670
	GRADIENT	.05794	-.02302	-.00453	.00152	-.00028	-.00014	.00031	.00021	.00013	-.00079

RUN NO. 155/ 0 RN/L = 7.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.202	-5.810	-.47540	.16890	-.04780	.00800	.00100	.42390	.24650	.04320	.06960	.06450
1.202	-3.420	-.28490	.09240	-.00430	.01650	.00230	.42940	.25640	.04210	.06730	.06340
1.202	-2 230	- 20050	.06220	-.00440	-.00860	.00000	.42420	.25500	.04070	.06560	.06270
1.202	-1.040	-.11900	.03230	.00380	-.00230	.00030	.42580	.25740	04040	06450	.06330
1.202	. .160	-.02810	-.00240	.00040	.00440	.00090	.42730	.25970	.04000	.06350	.06400
1.202	1.310	03310	-.02250	.00590	-.00180	.00040	.42530	.25950	.04030	.06160	.06389
1.202	2.440	.10660	-.05810	-.02900	01290	.00050	.42430	.26000	04040	.06080	.06290
1.202	3.580	15640	-.07120	-.04420	.03720	.00200	.42600	.26240	.04100	.06060	.06190
1.202	5.970	.32630	-.13320	-.02660	.02090	.00120	.42740	.26070	.04190	.06310	.06140
1.202	.130	-.03450	-.00350	-.04870	.02050	.00130	.42750	26170	.04060	.06180	.06320
	GRADIENT	.06399	- 02406	-.00504	00318	.00000	-.00032	00092	-.00012	-.00100	-.00011

MSFC THT 600 (FA14) 02TISIA2RIK1 . (R1L039) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 128/ 1 RN/L = 4.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.599	-5.160	-.39780	.15450	-.02390.	.01130	.00310	.24540	.12730	.02430	.05410	.03960
.599	-3.080	-.29860	.09920	.03510	-.00130	.00330	.24910	.13310	.02460	.05240	.03890
.599	-2.010	-.24340	.08910	-.02140	.00320	.00180	.24320	.12550	.02440	.05220	.04090
.599	-.900	-.15290	.06020	-.04340	.02520	.00410	.24360	.12750	.02390	.05090	.04130
.599	.140	-.09800	.03480	.03680	-.00610	.00160	.24280	.12860	.02330	.04940	.04130
.599	1.190	-.05430	.02340	.03570	-.00990	.00120	.23860	.12540	.02320	.04850	.04120
.599	2.290	.02700	-.00290	.02480	-.00700	.00120	.23530	.12160	.02330	.04890	.04130
.599	3.350	.08120	-.02290	.02030	-.00750	.00130	.23210	.12050	.02310	.04890	.03950
.599	5.480	.19770	-.06430	-.02170	.00620	.00190	.22820	.11440	.02290	.05020	.04050
.599	.130	-.11110	.04420	.02330	-.01150	.00080	.23770	.12310	.02410	.05010	.04030
	GRADIENT	.05930	-.01957	.00416	-.00244	-.00033	-.00239	-.00159	-.00025	-.00065	.00008

RUN NO. 127/ 2 RN/L = 6.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.898	-5.490	-.40330	.14430	.00620	-.00170	00080	.28680	.12890	.03300	.06410	.06070
.898	-3 300	-.28700	.09650	-.03120	.01960	.00140	.28240	.13440	.03040	.05890	.05860
.898	-2.170	-.23050	.07610	.00030	-.00100	.00000	.27970	.13400	.03090	.05920	.05540
.898	-1.020	-.13820	.04130	-.01410	.00570	.00010	.27960	.13340	.03080	.05760	.05760
.898	.090	-.07280	.01820	-.04760	.01890	.00000	.27750	.13680	.02980	.05570	.05490
.898	1.140	-.02050	-.01470	-.01310	.00860	-.00060	.27990	.13680	.03050	.05690	.05550
.898	2.230	.02170	-.02900	-.02310	.00460	-.00190	.27750	.13270	.03120	.05780	.05580
.898	3.390	.13040	-.07680	-.04660	.01520	-.00160	.27750	.13650	.02980	05710	.05400
.898	5.620	.24090	-.11420	-.02810	.01850	-.00060	.28540	.13930	.03050	.05940	.05610
.898	.070	-.06930	.00940	-.01460	.01360	.00020	.28190	.14190	.02920	.05510	.05560
	GRADIENT	.06046	-.02554	-.00299	.00004	-.00043	-.00061	.00023	-.00005	- 00029	-.00049

RUN NO. 126/ 2 RN/L = 7.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1 204	-5.750	-.44440	.15830	.01800	-.00200	.00150	45160	.26510	.04720	.07170	.06750
1.204	-3 380	-.27470	.09250	-.00150	00440	.00120	.44900	.26900	.04510	.06950	.06510
1.204	-2 150	-.16770	.05030	-.02570	.01200	.00130	.44870	.27050	.04430	.06830	.05540
1.204	-1.030	-.12090	.03420	-.02220	.01470	.00180	.44840	.27020	.04360	.06760	.06690
1.204	.120	- 04520	.00340	-.02360	.01690	.00170	.44760	.27210	.04270	.06690	.06580
1.204	1.340	03100	-.01810	.00180	.00140	.00070	.44520	.27160	.04250	.06560	.06530
1.204	2 460	.09560	- 04530	-.00780	-.00540	-.00010	.44010	.26680	.04290	.06470	.06550
1.204	3.570	.17160	-.09160	-.01180	.01100	.00120	.44590	.27480	.04300	.06370	.06420
1.204	5.920	.29070	- 11990	.00020	.00420	.00050	.44040	.26710	.04370	.06540	.06410
1.204	.110	-.05540	.00610	-.02810	.00500	.00060	.44450	.26960	.04310	.06590	.06580
	GRADIENT	.06221	-.02452	.00089	-.00088	-.00012	-.00092	.00035	-.00032	-.00082	-.00013

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OF POOR QUALITY

MSFC TWT 600 (FA14) 02T1S1A2R1K1 (R1L039) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN, XT
LREF = 1290.0000 IN. YMRP = .0000 IN, YT
BREF = 1290.0000 IN. ZMRP = .0000 IN, ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 172/ 0 RN/L = 7.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.969	-5.820	-.43000	.16000	.01090	-.01060	.00050	.40830	.30670	.02520	.03280	.04350
1.969	-3.450	-.27310	.09680	-.02170	.01010	.00150	.40870	.30780	.02570	.03190	.04310
1.969	-2.240	-.20540	.07910	-.02050	.00720	.00130	.40690	.30610	.02590	.03240	04240
1.969	-1.040	-.12800	.05040	-.00780	.00210	.00120	.40320	.30280	.02610	.03280	.04140
1.969	.130	-.06070	.02650	-.01180	.00640	.00160	.40410	.30570	.02670	.03290	.03870
1.969	1.320	.01220	-.00110	-.02680	.01730	.00230	.40430	.30680	.02760	.03300	.03670
1.969	2.520	.07670	-.01810	-.02340	.01060	.00180	.40030	.30310	.02860	.03300	.03540
1.969	3.610	.12400	-.04110	-.00700	.00230	.00120	.38720	.29090	.02870	.03310	.03430
1.969	6.030	.28620	-.10130	-.01600	.01040	.00170	.39480	.29760	.02860	.03440	.03400
1.969	.110	-.07340	.03320	-.01020	.00400	.00140	.38550	.28920	.02630	.03220	.03770
	GRADIENT	.05737	-.01995	.00057	-.00003	.00004	-.00230	-.00158	.00048	.00015	-.00136

RUN NO. 180/ 0 RN/L = 7.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.260	-.32180	.13020	-.00610	-.00030	.00070	.29530	.24910	.01230	.01580	.01800
3.479	-3.100	-.23120	.09980	.00460	-.00150	.00100	.28600	.24080	.01240	.01550	.01720
3.479	-1.990	-.17730	.08410	.00280	-.00130	.00090	.28240	.23730	.01260	.01530	.01710
3.479	-.900	-.13560	.07330	.00580	-.00590	.00070	.27890	.23370	.01290	.01510	.01700
3.479	.160	-.09790	.06090	.00930	-.00530	.00090	.27610	.23140	.01300	.01490	.01670
3.479	1.270	-.04970	.04730	-.00300	.00210	.00100	.27270	.22810	.01300	.01480	.01670
3.479	2.330	-.00990	.03470	-.00760	.00120	.00100	26890	.22460	.01310	.01450	.01650
3.479	3.410	.03730	.01890	-.01050	.00460	.00090	.26660	.22270	.01320	01420	.01630
3.479	5.560	.12070	-.01170	-.01980	.00860	.00090	.26040	.21760	.01320	.01390	.01560
3.479	.180	-.08770	.05730	-.01720	.00720	.00140	.27560	.23110	.01310	.01460	.01670
	GRADIENT	.04042	-.01231	-.00247	.00103	.00001	-.00301	-.00281	.00012	-.00019	-.00014

RUN NO. 179/ 0 RN/L = 5.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-4 930	-.25030	.10120	.00510	-.00700	-.00020	.24960	.23290	.00540	.00330	.00790
4.959	-2.890	-.20490	09240	.02160	-.01690	-.00090	.23720	.22010	.00550	.00350	.00790
4.959	-1.840	-.15330	.07730	.00140	-.00430	.00010	.23350	.21580	.00560	.00350	.00840
4 959	-.820	-.12900	.06680	-.00990	.00140	.00030	.22810	.21040	.00570	.00350	.00830
4.959	.190	-.11570	07040	.00560	-.00440	- 00010	.22380	.20600	.00580	.00340	.00840
4 959	1.250	-.06700	05430	-.01620	.00660	.00050	.22170	.20390	.00590	.00330	.00840
4.959	2.260	-.03240	.04450	.02220	-.01460	-.00120	.21800	20020	.00590	.00320	.00850
4.959	3.310	.00010	03370	-.01550	.00330	-.00050	.21560	.19780	.00600	.00320	.00840
4.959	5.370	.08110	.00590	-.00400	-.00120	-.00020	.21130	.19370	.00610	.00320	.00810
4.959	.230	-.08450	.05650	-.01650	.00280	.00030	.22440	.20660	.00610	.00330	.00830
	GRADIENT	.03068	-.00823	-.00182	.00113	-.00003	-.00405	-.00418	.00008	-.00003	.00007

MSFC TWT 600 (FA14) 02T1S1A3R1K1 (R1L040) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 129/ 3 RN/L = 5.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.607	-5.210	-.45470	.18860	-.00220	.00280	.00380	.24020	.12530	.02410	.05440	.03630
.607	-3.070	-.28220	.11830	-.02980	.00270	.00240	.23750	.12220	.02410	.05240	.03860
.607	-1.970	-.21450	.08490	.05240	-.02050	.00220	.24110	.12890	.02310	.05120	.03780
.607	-.880	-.14460	.06430	-.00620	-.00030	.00240	.23820	.12530	.02360	.05120	.03800
.607	.130	-.11260	.04490	-.00510	.00890	.00300	.24070	.12730	.02340	.04980	.04010
.607	1.210	-.05230	.02820	.00240	.00520	.00260	.23770	.12950	.02280	.04870	.03660
.607	2.290	.02210	.00120	-.01430	.00220	.00220	.23530	.12480	.02320	.04930	.03780
.607	3.310	.05770	-.01160	-.02710	.01640	.00320	.23410	.12350	.02260	.04950	.03820
.607	5.500	.21990	-.06750	.00290	-.00180	.00240	.22800	.11610	.02280	.05090	.03810
.607	.170	-.09550	.04990	-.03520	.01620	.00330	.23750	.12730	.02310	.04950	.03740
	GRADIENT	.05332	-.01995	-.00387	.00307	.00009	-.00075	.00000	-.00017	-.00050	-.00009

RUN NO. 130/ 2 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.906	-5.530	-.41260	.14340	-.00110	-.00550	.00060	.29070	.12800	.03370	.06650	.06240
.906	-3.290	-.29040	.10220	-.00590	.00200	.00060	.28320	.13330	.03130	.06160	.05690
.906	-2.170	-.23040	.08140	-.02580	.00380	.00010	.28190	.12790	.03260	.06240	.05880
.906	-1.090	-.15740	.03830	.02870	-.01420	-.00020	.28520	.13350	.03290	.06090	.05770
.906	.080	-.07060	.01220	-.02950	.01070	.00050	.28350	.13650	.03170	.05930	.05590
.906	1.180	-.01190	-.01370	-.04100	.01320	.00000	.28170	.13430	.03180	.06000	.05540
.906	2.280	.04230	-.03280	-.03870	.01130	-.00060	.28050	.13640	.03070	.05900	.05420
.906	3.410	.12930	-.07300	-.01600	.00850	-.00030	.28410	.13720	.03130	.06040	.05510
.906	5.710	.28840	-.13150	.00630	-.00380	-.00090	.28720	.13770	.03160	.06170	.05610
.906	.050	-.08760	.01920	.01500	-.00370	.00050	.28430	.13070	.03340	.06130	.05880
	GRADIENT	.06237	-.02577	-.00407	.00200	-.00012	-.00012	.00094	-.00016	-.00036	-.00054

RUN NO. 131/ 2 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.205	-5.760	-.47560	.18130	.00660	.00460	.00170	.44620	.26110	.04670	.07180	.06640
1.205	-3.400	-.28870	.10070	-.01470	-.00080	.00040	.44410	.26350	.04510	.07030	.06520
1.205	-2.210	-.20130	.06680	-.03350	.02060	.00190	.44510	.26840	.04350	.06840	.06460
1.205	-.950	-.09810	.03260	-.03510	.01960	.00180	.44390	.26690	.04300	.06760	.06620
1.205	.160	-.03770	.00720	-.01600	.00640	.00080	.44260	.26880	.04230	.06670	.06460
1.205	1.330	.03740	-.02600	-.01540	.00760	.00090	.44280	.26940	.04250	.06600	.06480
1.205	2.410	.10210	-.06230	.00280	.00390	.00090	.44260	.27100	.04260	.06450	.06430
1.205	3.610	.16700	-.07510	-.02440	.01240	.00100	.43700	.26610	.04290	.06360	.06420
1.205	5.970	.31380	-.12390	-.02880	.02030	.00120	.43640	.26320	.04410	.06560	.06340
1.205	.150	-.04100	.00820	.02960	-.01370	.00000	.44230	.26780	.04330	.06620	.06500
	GRADIENT	.06487	-.02593	.00189	-.00015	-.00003	-.00084	.00048	-.00028	-.00091	-.00015

MSFC TWT 600 (FA14) 02T1S1A3RIK1 (R1L040) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 171/ 0 RN/L = 7.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.980	-5.820	-.42950	.15870	.01290	-.00850	.00060	.40570	.30450	.02490	.03300	.04310
1.980	-3.430	-.27350	.10020	-.03770	.02050	.00200	.40570	.30480	.02570	.03200	.04300
1.980	-2.240	-.20510	.07850	-.01410	.00640	.00140	.40420	.30380	.02570	.03230	.04210
1.980	-1.050	-.13430	.05400	-.00880	.00520	.00150	.40380	.30410	.02580	.03250	.04120
1.980	.110	-.07010	.03160	-.01420	.00160	.00120	.40160	.30340	.02660	.03300	.03850
1.980	1.280	-.00480	.00730	.00980	-.00650	.00100	.39700	.30020	.02720	.03280	.03660
1.980	2.440	.05120	-.01080	-.00810	.00360	.00130	.38300	.28820	.02780	.03230	.03480
1.980	3.630	.11950	-.03190	-.00620	-.00280	.00070	.38070	.28520	.02840	.03290	.03400
1.980	5.810	.26620	-.10580	.01850	-.00920	.00080	.39140	.29500	.02830	.03410	.03390
1.980	.100	-.07930	.03630	-.01820	.00830	.00160	.38250	.28740	.02600	.03200	.03710
	GRADIENT	.05541	-.01891	.00382	-.00266	-.00014	-.00377	-.00285	.00042	.00009	-.00142

RUN NO. 181/ 0 RN/L = 7.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.260	-.32460	.13230	-.00390	.00060	.00100	.29550	.24910	.01230	.01580	.01810
3.479	-3.080	-.22580	.09930	-.01130	.00450	.00100	.28560	.24030	.01240	.01550	.01720
3.479	-1.990	-.18070	.08700	-.00260	.00010	.00090	.28180	.23640	.01260	.01540	.01720
3.479	-.900	-.12990	.06950	-.01460	.00450	.00110	.27960	.23410	.01290	.01520	.01720
3.479	.180	-.08730	.05720	-.00700	.00120	.00100	.27610	.23110	.01300	.01500	.01690
3.479	1.270	-.05260	.04870	.00080	-.00360	.00060	.27260	.22800	.01300	.01480	.01660
3.479	2.320	-.01190	.03470	-.01570	.00680	.00110	.26940	.22500	.01310	.01460	.01650
3.479	3.410	.03590	.01820	.00640	-.00640	.00020	.26490	.22110	.01320	.01420	.01630
3.479	5.610	.14050	-.01580	.00830	-.00550	.00030	.26070	.21800	.01320	.01370	.01570
3.479	.160	-.09940	.06260	.01030	-.00300	.00110	.27550	.23080	.01310	.01460	.01680
	GRADIENT	.03966	-.01218	.00140	-.00091	-.00008	-.00310	-.00286	.00012	-.00019	-.00016

RUN NO. 182/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-4.950	-.27340	.11270	.00260	-.00190	.00040	.26370	.24760	.00540	.00260	.00790
4.959	-2.880	-.20520	.09490	-.00770	.00550	.00080	.25290	.23600	.00560	.00280	.00830
4.959	-1.850	-.16920	.08350	-.01780	.01150	.00120	.24710	.22990	.00570	.00300	.00830
4.959	-.830	-.14710	.07970	-.00310	-.00130	.00040	.24080	.22370	.00590	.00310	.00800
4.959	.200	-.09270	.06100	.01030	-.00390	.00050	.23760	.22020	.00590	.00310	.00830
4.959	1.220	-.07850	.06090	.01510	-.00980	.00000	.23320	.21590	.00600	.00300	.00810
4.959	2.260	-.04120	.05110	-.11040	.06400	.00340	.23340	.21600	.00610	.00300	.00820
4.959	3.290	.00630	.03070	-.02080	.01860	.00130	.23290	.21520	.00620	.00300	.00830
4.959	5.360	.08010	.00900	-.05950	.03310	.00160	.22510	.20750	.00630	.00310	.00810
4.959	.200	-.10640	.06800	-.06870	.03810	.00220	.23980	.22210	.00630	.00310	.00810
	GRADIENT	.03314	-.00937	-.00589	.00385	.00017	-.00390	-.00406	.00010	.00004	.00002

MSFC TWT 600 (FA14) 02T1S1A3R2K1 (RIL041) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN XT
LREF = 1290.0000 IN. YMRP = .0000 IN, YT
BREF = 1290.0000 IN. ZMRP = .0000 IN, ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 134/ 0 RN/L = 5.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.591	-5.160	-.37790	.13250	-.03100	.01270	.00460	.24980	.12520	.02570	.05820	.04060
.591	-3.070	-.30650	.11400	.00430	.00490	.00360	.24630	.12420	.02490	.05530	.04180
.591	-2.000	-.23540	.09350	-.00560	-.00450	.00240	.24220	.11980	.02470	.05540	.04210
.591	-.930	-.17600	.06750	.01230	-.01360	.00180	.24140	.11930	.02520	.05520	.04160
.591	.110	-.12820	.04570	.04600	-.02300	.00120	.24310	.12190	.02480	.05370	.04260
.591	1.210	-.03810	.01450	-.01810	.01210	.00320	.24270	.12410	.02440	.05230	.04170
.591	2.210	-.01690	.01650	-.01330	.00630	.00610	.23930	.11770	.02470	.05290	.04390
.591	3.350	.09810	-.02640	.01720	-.00730	.00270	.23660	.11590	.02430	.05290	.04340
.591	5.480	.20080	-.06380	-.01150	.00290	.00240	.22940	.10620	.02490	.05540	.04270
.591	.140	-.10090	.03820	.00280	.00290	.00270	.24210	.12380	.02420	.05280	.04110
	GRADIENT	.06006	-.02110	-.00023	.00036	.00020	-.00113	-.00081	-.00009	-.00051	.00028

RUN NO. 133/ 0 RN/L = 6.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.900	-5.520	-.42230	.15270	-.00650	.00750	.00200	.28520	.12320	.03170	.06770	.06250
.900	-3 300	-.29720	.10460	.01170	-.00390	.00080	.28200	.12860	.03090	.06350	.05890
.900	-2.210	-.22410	.07010	.00070	.00000	.00060	.28290	.12560	.03300	.06540	.05870
.900	-1.080	-.17500	.05640	-.01730	.00610	.00070	.27830	.12890	.03060	.06170	.05710
.900	.020	-.10330	.02330	-.00270	.00100	.00050	.28030	.12870	.03180	.06290	.05670
.900	1.070	-.05380	-.00540	.00250	-.00400	-.00030	.27950	.12910	.03110	.06280	.05640
.900	2.200	.02000	-.02330	-.00160	.00290	-.00090	.27780	.13180	02980	.06070	.05520
.900	3.390	.13080	-.07460	-.02980	.01590	-.00080	.28040	.13100	.03010	.06230	.05680
.900	5.670	.23470	-.09480	-.01320	.00740	-.00120	.28090	.12940	.03030	.06300	.05800
.900	.070	-.06490	.00560	.00190	-.00350	-.00060	.28610	.13540	.03130	.06260	.05670
	GRADIENT	.06107	-.02535	-.00357	.00180	-.00028	-.00044	.00064	-.00027	-.00038	-.00045

RUN NO. 132/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.199	-5.710	-.46390	.18120	.00020	-.00310	.00080	.44120	.25140	.04450	.07550	.06970
1.199	-3.300	-.28330	.11370	-.01290	-.00370	.00010	.43890	.25480	.04300	.07340	.06760
1.199	-2.240	-.23610	.08620	.01320	-.01190	.00010	.44040	.25860	.04250	.07210	.06700
1.199	-1.040	-.14350	.05280	-.01430	.00440	.00070	.44030	.26000	.04160	.07100	.06750
1.199	.150	-.04240	.00770	-.00360	-.00740	.00010	.44100	.26140	.04120	.07010	.06810
1.199	1.370	04700	-.02170	-.00750	.00270	.00090	.44160	.26280	.04140	.06910	.06820
1.199	2.480	.08930	- 03310	-.02970	.01320	.00090	.43360	.25660	.04140	.06770	.06770
1.199	3.590	.13920	-.05380	-.01840	.01050	.00080	.43170	.25680	.04150	.06670	.06660
1.199	5.920	.31550	-.13570	-.03410	-.00440	-.00130	.42960	.25320	.04250	.06780	.06600
1.199	.180	-.04050	.01390	-.04860	.02460	.00190	.43970	.26030	.04130	.06980	.06810
	GRADIENT	.06496	-.02512	-.00297	.00281	00012	-.00103	.00015	-.00021	-.00095	-.00002

MSFC TWT 600 (FA14) O2T1S1A3R2K1 (RIL041) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 173/ 0 RN/L = 7.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.983	-5.820	-.43340	.16350	.00280	-.00470	.00060	.40070	.29600	.02480	.03550	.04420
1.983	-3.440	-.28170	.10430	-.01340	.00650	.00120	.39210	.28980	.02470	.03340	.04410
1.983	-2.240	-.20230	.07400	-.01850	.00700	.00110	.39140	.28950	.02480	.03360	.04330
1.983	-1.100	-.14820	.05620	.00520	-.00320	.00090	.38950	.28850	.02540	.03370	.04170
1.983	.110	-.06890	.02870	.00340	-.00130	.00090	.38820	.28850	.02620	.03370	.03980
1.983	1 280	-.00230	.00460	-.01860	.00600	.00100	.38760	.28850	.02720	.03370	.03800
1.983	2 470	.07570	-.02640	-.00660	.00290	.00100	.39010	.29000	.02830	.03430	.03730
1.983	3.670	.13760	-.04600	-.01160	.00550	.00120	.39140	.29170	.02880	.03440	.03640
1.983	6.000	.28130	-.10170	-.00410	.00150	.00100	.39170	.29090	.02840	.03500	.03720
1.983	.130	-.06130	.02690	-.01700	.00800	.00130	.38150	.28320	.02600	.03320	.03890
	GRADIENT	.05916	-.02123	.00015	-.00005	-.00000	-.00020	.00020	.00064	.00013	-.00117

RUN NO. 184/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.270	-.33060	.13620	-.01210	.00260	.00090	.29470	.24720	.01270	.01600	.01880
3.479	-3.080	-.22370	.09850	-.00550	.00100	.00080	.28610	.23930	.01280	.01580	.01810
3.479	-1.990	-.17820	.08350	-.00120	-.00110	.00090	.28300	.23650	.01290	.01560	.01790
3.479	-.910	-.13530	.07160	-.01290	.00610	.00120	.27970	.23340	.01320	.01540	.01760
3.479	.170	-.09430	.06100	-.00230	.00100	.00100	.27670	.23060	.01340	.01520	.01740
3 479	1.250	-.05400	.05060	.00100	-.00170	.00060	.27330	.22710	.01340	.01520	.01760
3.479	2.320	-.01790	.03860	.00660	-.00500	.00040	.27080	.22470	.01350	.01500	.01750
3.479	3.400	.02950	.02060	.00220	-.00250	.00030	.26820	.22270	.01350	.01460	.01720
3.479	5.590	.13130	-.01290	-.00740	.00040	.00020	.26180	.21720	.01350	.01440	.01660
3.479	.170	-.09450	.06010	-.00090	.00040	.00110	27690	.23100	.01340	.01490	.01740
	GRADIENT	.03844	-.01141	00174	-.00086	-.00010	-.00280	-.00264	.00012	-.00017	-.00012

RUN NO. 183/ 0 RN/L = 4.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-4.970	-.29610	.12080	.09600	-.05970	-.00300	.26180	.24480	.00550	.00320	.00810
4.959	-2.910	-.20830	.09170	.02980	-.02390	-.00060	.25320	.23560	.00570	.00340	.00830
4.959	-1.860	-.17800	.08820	-.08310	.04240	.00290	.25050	.23280	.00580	.00340	.00840
4.959	- 840	- 15410	.08190	- 02330	.00850	.00080	.24260	22500	.00590	.00340	.00820
4.959	200	-.10070	06260	-.06470	.03210	.00220	.23990	.22210	.00610	.00330	.00830
4 959	1 220	-.07920	.06190	-.07630	.04150	.00290	23670	.21880	00610	.00320	.00840
4.959	2.260	- 03740	.04810	-.08760	.04970	C0280	23480	.21690	.00620	.00320	.00840
4 959	3.300	.00490	03560	- 06980	.03600	.00200	.23100	.21300	.00630	.00320	.00840
4.959	5.350	.07220	.01310	- 06960	.03860	.00230	.22490	.20670	.00640	.00320	.00840
4.959	.190	-.11320	.06830	- 09140	.05080	.00270	.24230	.22400	.00640	.00320	.00850
	GRADIENT	03533	- 00977	-.01971	.01175	00060	-.00376	-.00386	.00010	-.00001	.00003

MSFC TNT 600 (FA14) 02T1S1A3R2K1F18 (RIL042) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 135/ 0 RN/L = 5.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.597	-5.120	-.38110	.15950	.00850	-.00610	.00290	.24670	.11700	.02690	.06110	.04150
.597	-3.060	-.32840	.13220	-.01410	-.00010	.00200	.24340	.11450	.02670	.05890	.04310
.597	-2.020	-.26500	.10260	.03110	-.01200	.00240	.24640	.11890	.02610	.05800	.04330
.597	-.960	-.20070	.07620	.00680	.00080	00260	.24590	.11790	.02640	.05810	.04340
.597	.140	-.10900	.04590	-.01150	.01230	.00300	.24550	.12030	.02570	.05580	.04360
.597	1.230	-.03790	.02640	-.03750	.00620	.00170	.23850	.11370	.02550	.05440	.04470
.597	2.280	.01300	.00370	-.00750	-.00190	.00120	.23930	.11370	.02610	.05500	.04420
.597	3.300	.04330	-.00570	-.04070	.01990	.00410	.23680	.11330	.02540	.05500	.04290
.597	5.420	.14560	-.04720	-.03640	.01500	.00260	.23000	.10410	.02550	.05670	.04350
.597	.140	-.11560	.05100	.00040	.00580	.00290	.24350	.11800	.02590	.05590	.04350
	GRADIENT	.06146	-.02215	-.00677	.00286	.00010	-.00139	-.00061	-.00016	-.00072	.00009

RUN NO. 136/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.898	-5.470	-.40640	.15360	- 04100	.01270	.00170	.28240	.11400	.03310	.07010	.06500
.898	-3.280	-.29060	.10240	-.01490	.00420	.00110	.28260	.12110	.03220	.06650	.06260
.898	-2.160	-.20510	.05990	-.05060	.01890	.00180	.28240	.12490	.03170	.06500	.06070
.898	-1.080	-.16650	.04940	00780	.00360	.00160	.28190	.12290	.03310	.06590	.05980
.898	.060	-.07900	.01390	-.02570	.00700	.00040	.28460	.12520	.03300	.06620	.06010
.898	1.130	-.04230	-.00020	.03070	-.00420	.00020	.28160	.12940	.03070	.06350	.05790
.898	2.230	.04800	-.04640	-.00810	.00090	-.00090	.28420	.12570	.03270	.06540	.06020
.898	3.500	.14090	-.06020	.01350	.00080	-.00100	.28030	.12320	.03170	.06500	.06030
.898	5.690	.26650	-.11750	-.03400	.01050	-.00090	.28320	.12600	.03170	.06620	.05910
	GRADIENT	.06152	-.02392	.00612	-.00170	-.00042	-.00012	.00045	-.00006	-.00019	-.00031

RUN NO. 137/ 0 RN/L = 7.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.202	-5.750	-.45220	.16800	-.02660	.01990	.00260	.43440	.24700	.04260	.07400	.07060
1.202	-3.360	-.28380	.10520	-.03660	.02250	.00220	.43420	.25050	.04170	.07240	.06950
1.202	-2.160	-.19350	.07030	-.00820	.00000	.00080	.43210	.25090	.04090	.07080	.06940
1.202	-1.070	-.14700	05010	-.00810	.00810	00160	.43350	.25480	.04000	.06940	.06910
1.202	.130	-.06910	.02880	-.01970	.01470	.00170	.43300	.25480	.03970	.06890	.06950
1.202	1.260	.01270	-.01570	-.02620	.01200	.00160	.43460	.25730	.03980	.06740	.06990
1.202	2.430	.09440	-.04590	.01630	-.02100	-.00060	.42870	.25280	.04000	.06710	.06850
1.202	3.550	.14580	-.06740	-.01750	.00960	00150	.42860	.25550	.03950	.06590	.06760
1.202	5.900	.28610	-.11380	-.00980	-.00400	-.00010	.42290	.24700	.04090	.06780	.06700
1.202	.160	-.04880	.01590	.01930	-.02270	-.00040	.43250	.25330	.04040	.06890	.06980
	GRADIENT	.06281	-.02531	.00276	-.00241	-.00015	-.00070	.00066	-.00027	-.00090	-.00021

MSFC TWT 600 (FA14) 02T1S1A3R2K1F18 (R1L042) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 978.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 174/ 0 RN/L = 7.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.984	-5.650	-.43940	.16060	-.00630	.00810	.00160	.40300	.29640	.02490	.03630	.04510
1.984	-3.440	-.27840	.10110	-.00420	-.00180	.00060	.39160	.28710	.02500	.03400	.04540
1.984	-2.260	-.21580	.08220	.00140	-.00260	.00080	.38940	.28510	.02520	.03420	.04480
1.984	-1.070	-.14130	.05470	-.01300	.00470	.00120	.38870	.28540	.02570	.03410	.04330
1.984	.070	-.07920	.03070	-.01250	.00710	.00150	.38810	.28660	.02650	.03390	.04100
1.984	1.290	-.00510	.00560	-.00840	.00170	.00090	.38590	.28440	.02760	.03430	.03950
1.984	2.470	.07050	-.02230	-.00630	.00280	.00110	.38830	.28650	.02860	.03460	.03840
1.984	3.640	.13540	-.04480	-.00830	.00330	.00130	.38920	.28720	.02920	.03490	.03770
1.984	5.970	.28680	-.11250	-.01320	.00720	.00140	.39270	.28980	.02870	.03540	.03870
1.984	.100	-.07560	.03330	.00130	.00420	.00160	.38180	.28060	.02660	.03390	.04050
	GRADIENT	.05899	-.02105	-.00070	.00070	.00007	-.00037	00006	.00064	.00011	-.00120

RUN NO. 185/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.280	-.32490	.13340	-.00140	-.00060	.00090	.29360	.24560	.01280	.01810	.01890
3.479	-3.090	-.23190	.10160	-.00120	-.00230	.00070	.28570	.23850	.01290	.01590	.01830
3.479	-2.000	-.18320	.08630	-.00470	-.00050	00070	.28100	23390	.01300	.01580	.01820
3.479	-.900	-.13140	.07000	-.01360	.00610	.00120	.27820	.23120	.01340	01570	.01790
3.479	.170	-.09330	.05960	.00010	-.00130	00090	.27520	22840	.01350	.01550	.01770
3.479	1.240	-.05700	.05040	.00500	-.00310	.00070	.27210	.22510	.01360	.01550	.01790
3.479	2.330	-.01160	.03520	.00920	-.00690	.00030	.26860	.22170	.01370	.01530	.01780
3.479	3.400	.03260	.01840	.01130	-.00710	.00030	.26600	.21970	.01370	01500	01760
3.479	5.580	12480	-.01150	.00620	-.00610	.00010	.25940	.21390	.01380	.01480	.01690
3.479	.170	-.09830	.06510	-.00260	.00040	.00090	.27420	.22760	.01360	.01520	.01770
	GRADIENT	.04002	-.01227	.00276	-.00120	-.00008	-.00297	-.00287	.00013	-.00013	-.00010

RUN NO. 186/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-4.960	-.29260	12420	-.04340	.01470	00150	.26350	.24640	.00550	.00320	00820
4.959	-2.880	-.20440	.09460	-.05060	.03020	.00300	.25430	.23650	00570	.00340	00850
4.959	-1.860	-.17320	.08510	.02720	-.01770	.00040	.24740	.22950	.00580	.00340	.00860
4.959	-.830	-.13820	07170	.06190	-.03520	-.00030	.24130	.22340	.00600	.00330	.00850
4.959	.210	-.09180	.06150	-.03210	.01390	.00180	.23920	.22160	00600	.00330	.00820
4.959	1.230	-.07250	.05660	.04770	-.03090	-.00040	.23270	.21460	.00610	.00320	.00860
4.959	2.260	-.02740	.03950	-.03420	02080	.00210	.23360	.21560	00620	.00320	.00860
4.959	3.300	.01040	.03140	.06870	-.04260	-.00130	.22690	.20870	.00630	.00320	.00860
4.959	5.360	08340	.00790	-.02960	.01600	.00170	.22470	.20650	.00640	.00320	.00840
4.959	.190	-.10700	.06500	-.06130	.03400	.00280	.24060	.22230	.00640	.00330	.00840
	GRADIENT	.03590	-.01097	.00905	-.00466	-.00025	-.00436	-.00446	.00010	-.00001	.00003

MSFC TNT 600 (FA14) O2T1S1A1R2K1 (RIL043) (10 OCT 75)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI=S—*— —90.000—Z — —*————;140———— —

RUN NO. 140/ 0 RN/L = 4.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.551	-5.220	-.43010	.14940	-.03580	.01010	.00340	.24870	.13010	.02420	.05320	.04110
.551	-3.040	-.28340	.10560	-.03110	.00970	.00270	.24450	.12830	.02420	.05160	.04040
.551	-2.000	-.23290	.08410	-.01100	.01220	.00350	.24490	.12960	.02330	.05080	.04110
.551	-.910	-.16510	.06480	-.01720	.00580	.00230	.24290	.12610	.02390	.05100	.04180
.551	.170	-.08810	.03870	-.02790	.01120	.00220	.24150	.12620	.02340	.04990	.04200
.551	1.220	-.04380	.02650	-.02250	.00490	.00190	.23810	.12280	.02320	.04940	.04260
.551	2.280	.00690	.01070	-.02060	.00460	.00170	.23710	.12310	.02290	.04960	.04130
.551	3.360	.08580	-.01820	-.04740	.02030	.00290	.23330	.12120	.02240	.04870	.04070
.551	5.470	.17830	-.04830	-.01330	.00270	.00210	.22720	.11290	.02270	.04980	.04150
.551	.170	-.07470	.03050	-.01150	.00550	.00210	.24350	.12750	.02340	.04970	.04280
	GRADIENT	.05718	-.01862	-.00247	.00053	-.00011	-.00181	-.00126	-.00023	-.00042	.00007

RUN NO. 139/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.899	-5.570	-.44100	.15090	.01120	-.00300	.00110	.28980	.13100	.03220	.06280	.06350
.899	-3.270	-.28080	.09830	-.01740	.01140	.00130	.28400	.13470	.03030	.05810	.06060
.899	-2.180	-.21480	.06400	.01480	-.00270	.00080	.28630	.13690	.03210	.06010	.05710
.899	-1.050	-.13670	.03200	-.00280	.01020	.00090	.28410	13880	.03090	.05770	.05660
.899	.070	-.07200	.01160	-.01060	.00460	-.00030	.28060	.13520	.03080	.05750	.05690
.899	1.200	.01040	-.02630	-.01610	.00700	-.00020	.28070	.13670	.03040	.05720	.05620
.899	2.300	.07410	-.05550	-.00390	.00190	-.00110	.28390	.13800	.03090	.05740	.05740
.899	3.430	.12680	-.06470	.01710	-.00200	-.00160	.28080	.13530	.03070	.05810	.05560
.899	5.680	.25510	-.10990	.00990	-.00850	-.00240	.28310	.13510	.03070	.05960	.05750
.899	.090	-.05510	.00090	.00920	.00090	.00010	.28760	.13770	.03140	.05840	.06000
	GRADIENT	.06221	-.02511	.00167	-.00109	-.00043	-.00057	.00007	-.00006	-.00019	-.00038

RUN NO. 138/ 0 RN/L = 7.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.204	-5.790	-.46380	.16930	-.00370	.00380	.00130	.43820	.25760	.04170	.07200	.06680
1.204	-3.370	-.28590	.10540	.00690	-.00630	.00010	.43580	.26010	.04090	.06930	.06530
1.204	-2.150	-.18350	.06350	.03720	-.02160	-.00050	.43600	.26250	.04050	.06830	.06460
1.204	-1.040	-.12460	03750	-.05010	.01830	.00100	.43750	.26350	.03980	.06780	.06630
1.204	.150	-.04580	.01290	-.03970	.02320	.00180	.43880	.26510	.03950	06790	.06620
1.204	1.320	.03720	-.02360	.00680	-.00200	.00090	.43910	.26810	.03930	.06560	.06590
1.204	2.430	.08160	-.03810	-.00690	.00100	.00070	.43410	.26370	.03940	.06540	.06550
1.204	3.600	.17380	- 08300	-.03460	.02330	.00200	.43740	.26650	.03970	.06530	.06570
1.204	6.000	.34900	-.14860	-.01260	.01040	.00110	.43580	.26580	.04060	.06580	.06350
1.204	.180	-.02550	.00000	-.03730	.03030	.00290	.44290	.27070	.03950	.06680	.06570
	GRADIENT	.06390	-.02559	-.00476	.00349	.00025	.00008	.00081	-.00019	-.00062	.00008

MSFC TWT 600 (FA14) 02T1S1A1R2K1 (R1L043) (10 OCT 75)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.0000 IN. YMRP = .0000 IN. YT
BREF = 1290.0000 IN. ZMRP = .0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 175/ 0 RN/L = 7.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.981	-5.820	-.43410	.16420	.00410	.00300	.00120	.40470	.30100	.02490	.03440	.04430
1.981	-3.440	-.27660	.10090	-.00710	.00350	.00110	.39490	.29220	.02490	.03330	.04440
1.981	-2.250	-.20590	.07620	.00280	.00160	.00110	.39520	.29360	.02490	.03330	.04330
1.981	-1.080	-.13840	.05040	-.01300	.00320	.00090	.39310	.29150	.02560	.03360	.04220
1.981	.110	-.06800	.02920	.00420	-.00180	.00090	.39110	.29170	.02630	.03340	.03960
1.981	1.280	.00290	.00030	-.00010	-.00060	.00080	.39090	.29200	.02740	.03360	.03780
1.981	2.450	.07040	-.02530	.01270	-.00570	.00070	.39280	.29320	.02840	.03410	.03690
1.981	3.700	.15920	-.05870	-.01330	.00130	.00100	.39590	.29540	.02930	.03480	.03610
1.981	6.000	.28410	-.10490	-.04140	.02130	.00200	.39470	.29390	.02870	.03510	.03660
1.981	.100	-.07300	.03160	.00480	-.00360	.00090	.38370	.28550	.02620	.03310	.03870
	GRADIENT	.06033	-.02206	.00040	-.00075	-.00004	-.00012	.00028	.00066	.00018	-.00127

RUN NO. 188/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
3.479	-5.270	-.33290	.13780	-.01410	.00760	.00140	.29520	.24780	.01270	.01590	.01870
3.479	-3.090	-.22680	.09940	-.01450	.00590	.00120	28710	.24050	01270	.01580	.01790
3.479	-1.990	-.17990	.08670	.00300	-.00310	.00090	.28340	.23710	.01290	.01560	.01760
3.479	-.920	-.14430	.07690	-.00030	-.00110	.00080	.27960	.23340	.01320	.01540	.01740
3.479	.160	-.09900	.06400	.00640	-.00410	.00090	.27700	.23110	.01330	.01520	.01720
3.479	1.240	-.05630	.04860	-.00270	-.00040	.00070	.27480	.22870	.01330	.01520	.01740
3.479	2.320	-.01660	.03770	.00730	-.00520	.00060	.27180	.22590	01350	.01500	.01730
3.479	3.410	.03550	.01850	00870	- 00510	.00040	.26920	.22380	01350	.01470	.01710
3.479	5.580	.12730	-.01240	-.00710	.00190	.00040	.26300	.21840	01350	.01440	.01650
3.479	.160	-.09770	.06260	-.00880	.00400	.00110	.27820	.23240	.01340	.01500	.01720
	GRADIENT	.03968	-.01219	.00251	-.00121	-.00010	-.00270	-.00255	.00012	-.00016	-.00010

RUN NO. 187/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
4.959	-4.960	-.30050	.12650	.01260	-.00490	.00060	.26790	.25070	.00550	.00330	00820
4.959	-2.900	-.21860	09770	-.01900	.00240	.00080	.25510	.23760	.00570	.00340	.00830
4.959	-1.870	-.18730	.09120	.02170	-.01260	.00030	.25070	.23270	.00580	00350	.00860
4.959	-.840	-.15720	.08300	.07990	-.04670	-.00110	.24460	.22670	.00590	.00340	.00840
4.959	.190	-.11140	.06780	-.00950	.00780	.00150	.24320	.22520	.00600	.00340	.00840
4.959	1.220	-.08080	.06000	-.05790	.02920	.00230	.24010	.22230	.00610	.00320	.00830
4.959	2.260	- 03550	.04740	-.04120	.01850	.00110	.23650	.21860	.00620	.00320	.00830
4 959	3.300	.01230	.02990	-.05350	.02950	.00210	.23390	.21580	.00630	.00320	.00840
4.959	5.350	.07340	.01240	-.04870	.02310	.00140	.22560	.20760	.00630	00320	.00820
4.959	.190	-.11280	.06660	.00590	-.01250	-.00030	.24090	.22250	.00640	.00330	.00850
	GRADIENT	.03693	-.01106	-.00917	.00502	.00021	-.00395	-.00404	.00010	-.00002	.00001

MSFC TWT 600 (FA14) 02T1S3A3R2K1 (RIL044) (10 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN, XT
LREF = 1290.0000 IN. YMRP = .0000 IN, YT
BREF = 1290.0000 IN. ZMRP = .0000 IN, ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 ORBINC = .000
PHI-S = 90.000 Z = .140

RUN NO. 158/ 0 RN/L = 5.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.604	-5.160	-.37790	.14110	-.01870	.00480	.00330	.24270	.11710	.02460	.05710	.04370
.604	-3.040	-.25830	.09780	.01480	-.00870	.00240	.24060	.11860	.02420	.05530	.04230
.604	-1.950	-.16950	.07190	.02070	-.01320	.00180	.24110	.12040	.02390	.05500	.04160
.604	-.940	-.17480	.06550	-.02450	.00240	.00180	.23770	.11930	.02320	.05390	.04120
.604	.140	-.09440	.03460	-.01380	.00100	.00190	.23930	.11990	.02350	.05330	.04250
.604	1.260	-.01140	.01840	-.00290	-.00450	.00130	.23480	.11520	.02350	.05280	.04310
.604	2.270	.00690	.00420	-.02480	.00980	.00250	.23420	.11760	.02280	.05180	.04190
.604	3.320	.06500	-.02160	-.03730	.01070	.00240	.23170	.11440	.02280	.05240	.04190
.604	5.480	.18480	-.05670	-.04780	.01250	.00180	.22410	.10420	.02300	.05410	.04260
.604	.120	-.11910	.04420	-.01120	.00320	.00180	.23830	.11980	.02340	.05270	.04240
	GRADIENT	.05142	-.01820	-.00754	.00325	.00003	-.00146	-.00075	-.00020	-.00054	.00005

RUN NO. 157/ 0 RN/L = 6.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
.900	-5.540	-.42680	.14660	.02290	-.01050	.00100	.27290	.11410	.03150	.06700	.06010
.900	-3.250	-.28250	.10660	-.00970	.00310	.00090	.26420	.11450	.02980	.06170	.05800
.900	-2.180	-.20400	.05470	-.01870	.00350	.00070	.26790	.11830	.03120	.06200	.05630
.900	-1.090	-.15200	.03460	.01790	-.00720	.00040	.26850	.12120	.03050	.06110	.05560
.900	.050	-.08380	.01370	-.00130	-.00360	-.00040	.26600	.11930	.03160	.06190	.05300
.900	1.190	-.00350	-.01670	.00580	-.00800	-.00120	.26300	.12060	.02980	.06000	.05250
.900	2.350	.07820	-.04540	-.02260	.00900	-.00070	.26390	.12060	.02950	.06070	.05290
.900	3.400	.12070	-.06910	.01020	-.00390	-.00150	.26780	.12400	.02920	.06110	.05340
.900	5.640	.20400	-.07570	-.00830	-.00150	-.00180	.26520	.11700	.02970	.06450	.05380
900	.030	-.08280	.00910	-.03750	.01190	.00000	.26800	.12410	.03010	.06010	.05370
	GRADIENT	.06147	-.02486	.00121	-.00032	-.00037	-.00010	.00103	-.00019	-.00018	-.00076

RUN NO. 156/ 0 RN/L = 7.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CA	CAF	CABO	CABS	CABE
1.204	-5.820	-.48490	18060	.01930	-.01230	.00070	.42870	.24570	.04330	07270	.06670
1.204	-3.330	-.26700	.09780	.00460	-.01380	.00020	.42680	.24820	.04220	.07100	.06530
1.204	-2.200	-.20080	.06800	-.02520	.01790	.00220	.42980	.25380	.04120	.06940	.06520
1.204	-1.020	-.11720	.03510	.02190	-.00800	.00110	.42740	.25460	.04030	.06800	.06440
1.204	.100	-.06850	.02150	.03110	-.01640	.00030	.42420	.25270	.03940	.06660	.06530
1.204	1.340	.03250	-.01460	-.01760	.01450	.00170	.42520	.25410	.03970	.06560	.06560
1.204	2.440	.07940	-.03400	-.00680	.00940	.00120	.42320	.25420	.03970	.06420	.06490
1.204	3.630	.15060	-.05520	-.00100	-.00670	-.00030	.41770	.24800	.04040	.06470	.06450
1.204	5.980	.31800	-.12500	.02020	-.01750	-.00100	.41880	.24900	.04090	.06560	.06320
1.204	.130	-.05930	.01840	-.00750	-.00690	.00030	.42440	.25140	.04070	.06670	.06540
	GRADIENT	.06039	-.02192	-.00063	.00084	-.00009	-.00131	-.00001	-.00028	-.00097	-.00006